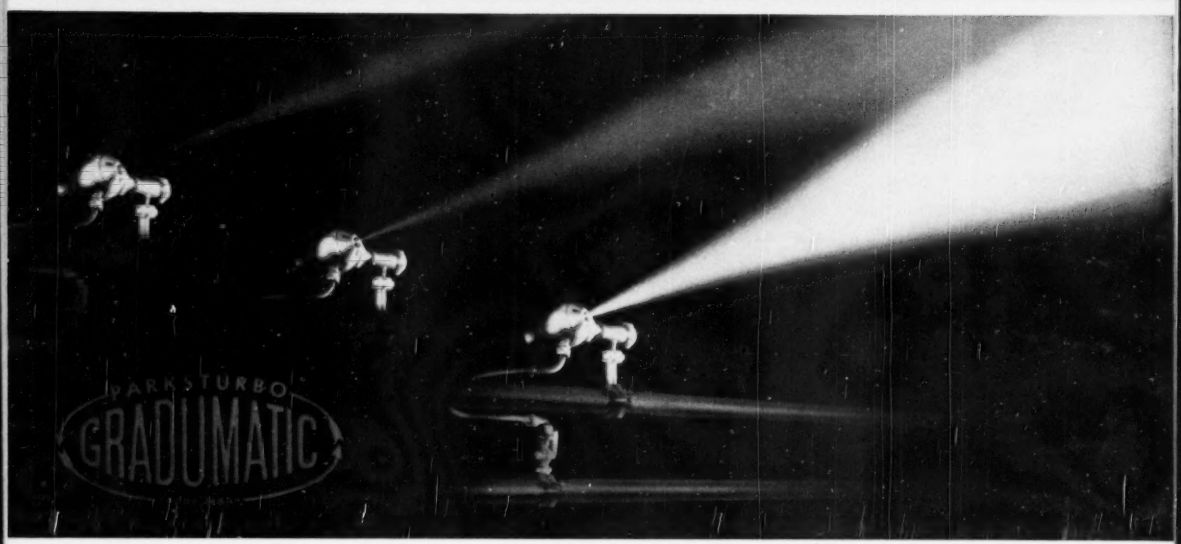
Textile Industries

Formerly
COTTON
Textile Industries



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But would you care for it unless it was safe, from overflow, leakage or wetting down? And wouldn't you appreciate it if air and water ports . . . both were self-cleaning?

Advantageous as all this is, would you bother with such a system if it ate its head off in power? Or upkeep? Or repairs? Or had to be tinkered with, or frequently tested or readjusted?

° ° °

All these improvements are now available in the new ParksTurbo Gradumatic Humidifying System.

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Volume 114 Number 7

DRAPER'S NEW #1 Spinning Frame Builder Motion

REDUCES DOFFING AND BATTERY HAND COSTS

THE #1 Spinning Frame Builder Motion is an automatic builder motion that removes the necessity of constant attention to the frames. It builds a perfect feeler bunch of the desired yardage and width, eliminating the possibility of having several turns put on the step above the bunch and thereby causing the Midget Feeler to operate improperly.

The position of the filling package with respect to the feeler bunch is controlled exactly. The package can be built to any desired diameter and taper.

Uniform bobbins of uniform yardage are possible as the height of the build on each set of bobbins can be accurately predetermined. It is difficult for doffers to "short doff" a frame.

A tip bunch can be put on in various sizes or eliminated entirely. This bunch speeds up the work of battery hands by as much as 30% as they do not have to look for the ends.

The ring rail is automatically lowered and locked in the doffing position as the frame knocks off. The bobbins are then ready to be doffed with or without slackening the ends, according to mill practice.

When the frame is started up again the motion has reset itself automatically and winding the rack is eliminated.

Investigate this builder motion to cut your spinning costs.

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To assure longer life for grease-lubricated ball and roller bearings, use *Texaco Regal Starfak*. It has high resistance to oxidation, gum formation, separation and leakage . . . assures smoother operation, lower maintenance costs.

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TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

Textile Industries

Volume 114, Number 7
July, 1950

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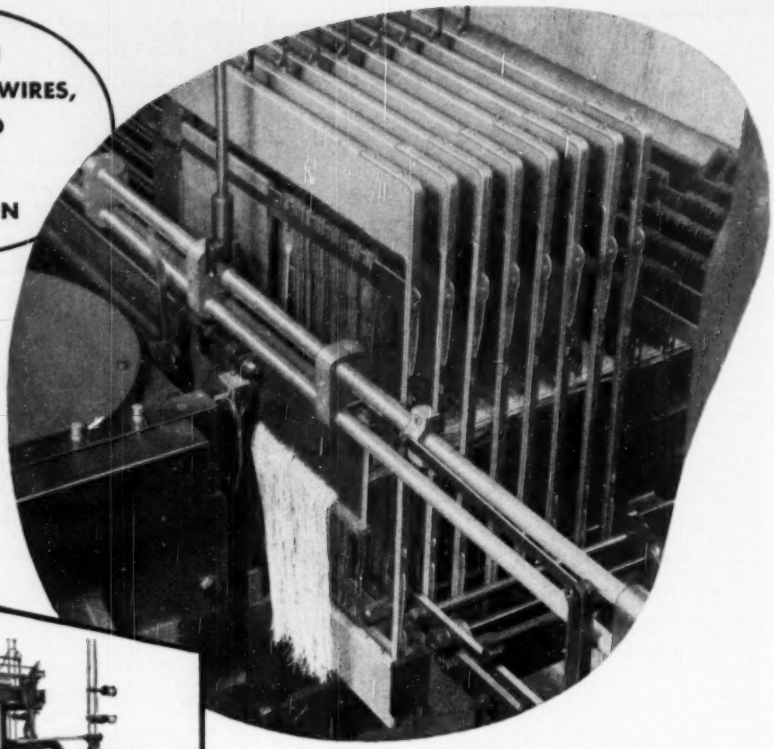

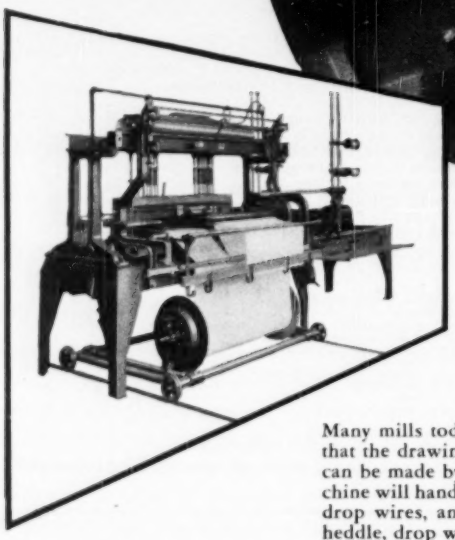

BARBER-COLMAN DRAWING-IN MACHINE

Many mills today are running such a variety of weaves, patterns, and stripes that the drawing-in operation becomes a major cost item. *Substantial savings* can be made by the use of a Barber-Colman Drawing-In Machine. This machine will handle any plain, fancy, or dobby weave. It draws-in all the heddles, drop wires, and reed in *one* operation — automatically selecting the proper heddle, drop wire, and reed dent for each thread. Any form of skip draw can be handled as easily as straight sequence, and the draw can be made from either a flat sheet or leased warp. The machine is available in a variety of capacities, drawing as many harness and banks of drop wires as required. Variations in size will take care of all standard loom widths. Modern mills of any size can take advantage of the versatility, accuracy, and efficiency of this outstanding machine to effect important savings in what has been a slow and costly hand operation. Consult your Barber-Colman representative for a discussion of possibilities in your own mill.

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Rayon Reports

Published Monthly by American Viscose Corporation, New York, N. Y.

Avisco Introduces New Heavy Denier Carpet Staple

Avisco "15" engineered for carpet industry requirements

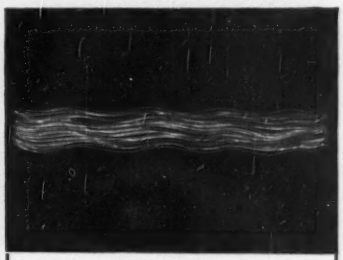
In response to the needs of the carpet industry, Avisco has developed a 15 denier rayon staple especially designed for use in rugs. The result of more than 10 years of study and experiment, Avisco "15" is a dull crimped staple engineered to produce a firm, sturdy surface. Tests show that carpets made from it wear exceptionally well.

Rayon brings to the carpet industry new opportunities for unlimited styling. Rayon's well-known affinity for dyes will make possible clearer, brighter rug colors. New effects in color, texture and pattern can also be achieved by cross-dyeing and by the use of variations in luster.

Already woven are carpets and rugs on Axminster, Wilton and velvet looms in a wide range of plain colors and patterns, in twist, cut and un-cut pile types. These new products will be introduced by manufacturers at floor covering shows being held this summer in Chicago and New York.

By taking advantage of the unlimited styling opportunities made available by rayon and the stable price of the man-made fiber, carpet manufacturers may well be opening up new profit possibilities for their industry. Rayon can stimulate the market for carpets just as it has for men's summer suits, women's suits and boys' wear. Avisco "15" could become as important to the carpet industry as rayon cord is to the tire industry. The reputation for versatility won by rayon in new fields benefits all users of rayon.

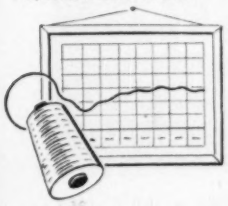
Avisco 15-denier carpet staple



Avisco 1.5-denier apparel staple

RAYON 20 YEARS AGO

NEW YORK, July, 1930—In spite of the general slump, rayon is holding its own, and even making progress in various fields, particularly in rayon and cotton mixtures.



NEW YORK, July, 1930—For fall, women's wear cutters are favoring worsteds with rayon decorations.

NEW YORK, July, 1930—Leaders in the fields of knitting and weaving are welcoming the announcement of the "Crown Tested Plan" by the Viscose Company.

MAKE USE OF *Avisco* 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

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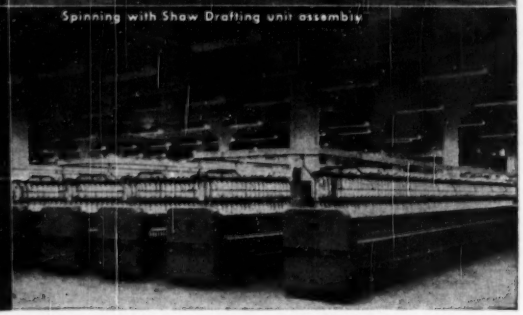
FS-2 Roving



Spinning with Shaw Drafting unit assembly

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ENVIABLE ACCOMPLISHMENT
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"Our production at the Magog Plant has risen to the point where the million-yards-a-week quota has been passed, an achievement which puts our production at Magog ahead of any other mill in Canada."

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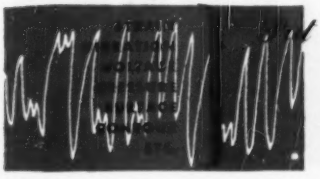

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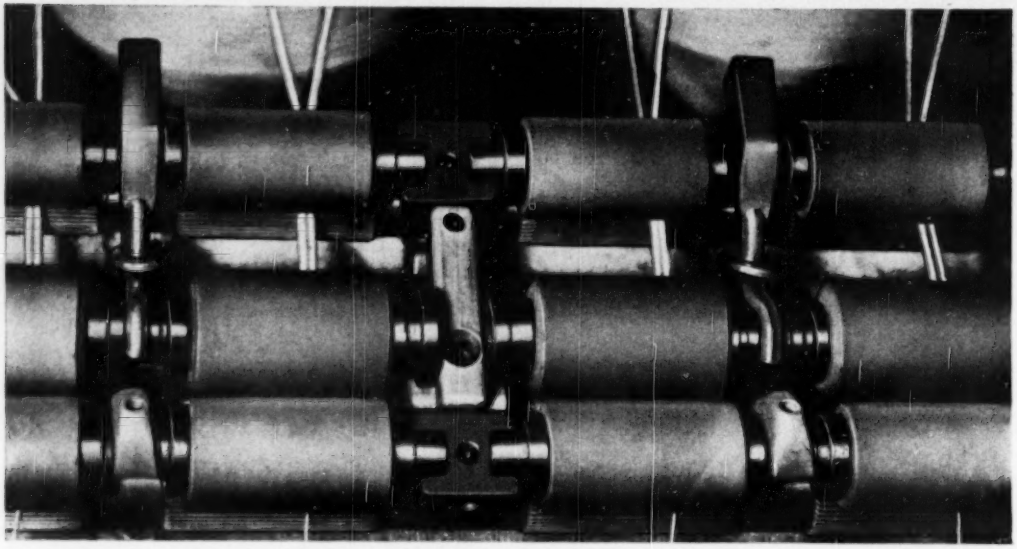
S-L-T NEEDLE BEARING TOP ROLL

FOR ROVING AND SPINNING



Requires only annual lubrication... Shells interchangeable from arbor to arbor... Shell covering interchangeable at will... No yarn spoilage from black oil... these are a few of the

18 Money- and Time-Saving Features of this new S-L-T Needle Bearing TOP ROLL, described in detail in a series of mailing pieces prepared for Management, Supervisors and Textile Engineers who are desirous of keeping up with the latest developments in the industry. If you are not receiving this series, a request to our nearest sales office will bring them to you.

Every mill should try out at least one frame of these S-L-T Top Rolls. We have a special plan which makes this possible on a very economical basis.

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for take-ups and adjustments

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the fabric

Back of the fabric . . .
the fiber

And back of the fiber
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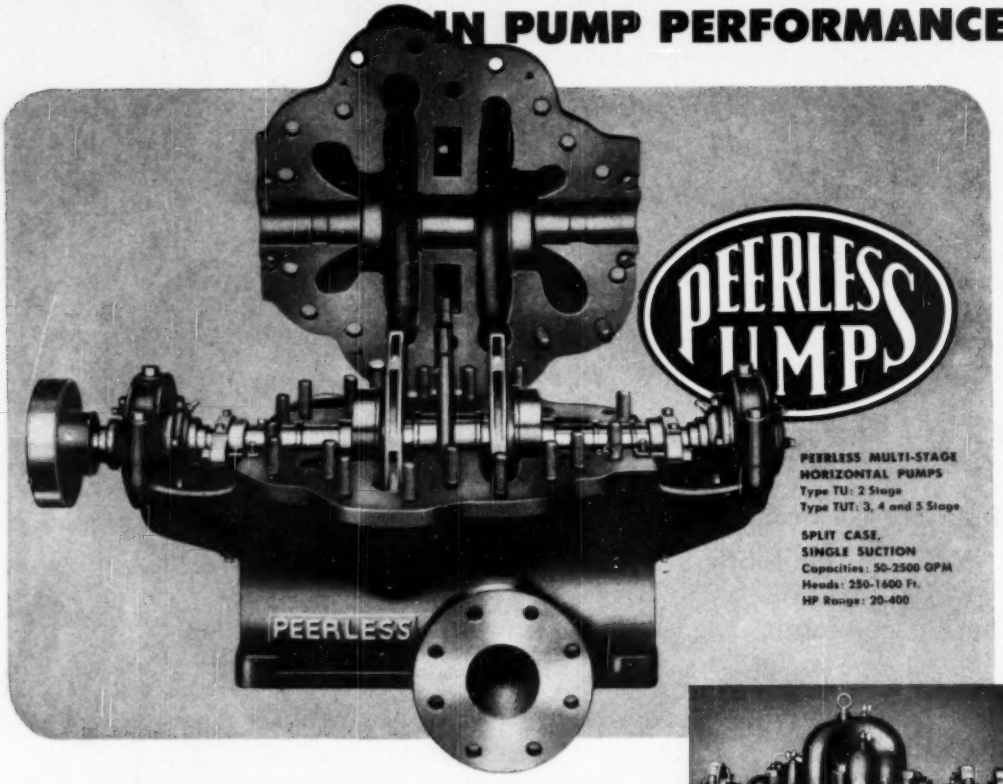


PEERLESS TYPE TU PUMP WITH THE CASE SPLIT FOR A LOOK AT CONSTRUCTION FEATURES

Peerless Type TU and Type TUT multi-stage horizontal pumps squarely meet your requirements where moderate capacity and high head applications in handling boiler feed water and process liquids are involved. In general, these pumps are of horizontal, split-case design. They incorporate a number of features that provide a plus in pump performance without paying a premium on your investment.

For example: Peerless TU and TUT pumps are equipped with duplex angular contact thrust bearings, water cooled bearing housings, heavy stiff case rings, sleeves locked against impeller hubs, in-and-out cooling and sealing connections at stuffing box.

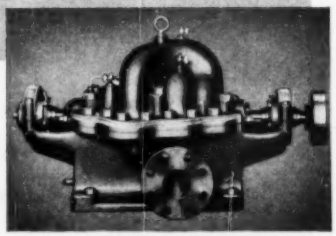
The return passages from discharge to suction of the impellers is the best method developed over a period of years for converting velocity into pressure between stages providing a definite improvement in efficiency.

The high pressure stuffing box on these pumps is under one stage pressure only, regardless of the net pressure developed by the pump.

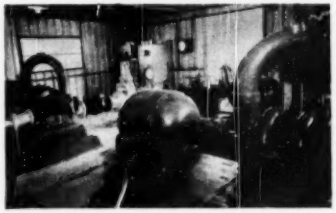
The spacer bushings between stages are serrated with grooves throughout its length, are longer than competitive pumps thus making an effective seal between stage pressures. The serrations allow closer clearances and minimize any tendency to bind.

Shafts are rugged for the HP involved and will bear comparison with conventional pumps.

Peerless Type TU and TUT pumps are described in Bulletin B-301. Write for your copy today.



Exterior view of Type TU 2-stage pump showing internal cross-over as furnished on 4" size and smaller.



View in booster station shows Type TUT 3-stage pumps each handling 325 gpm of process water at 600 ft. head.

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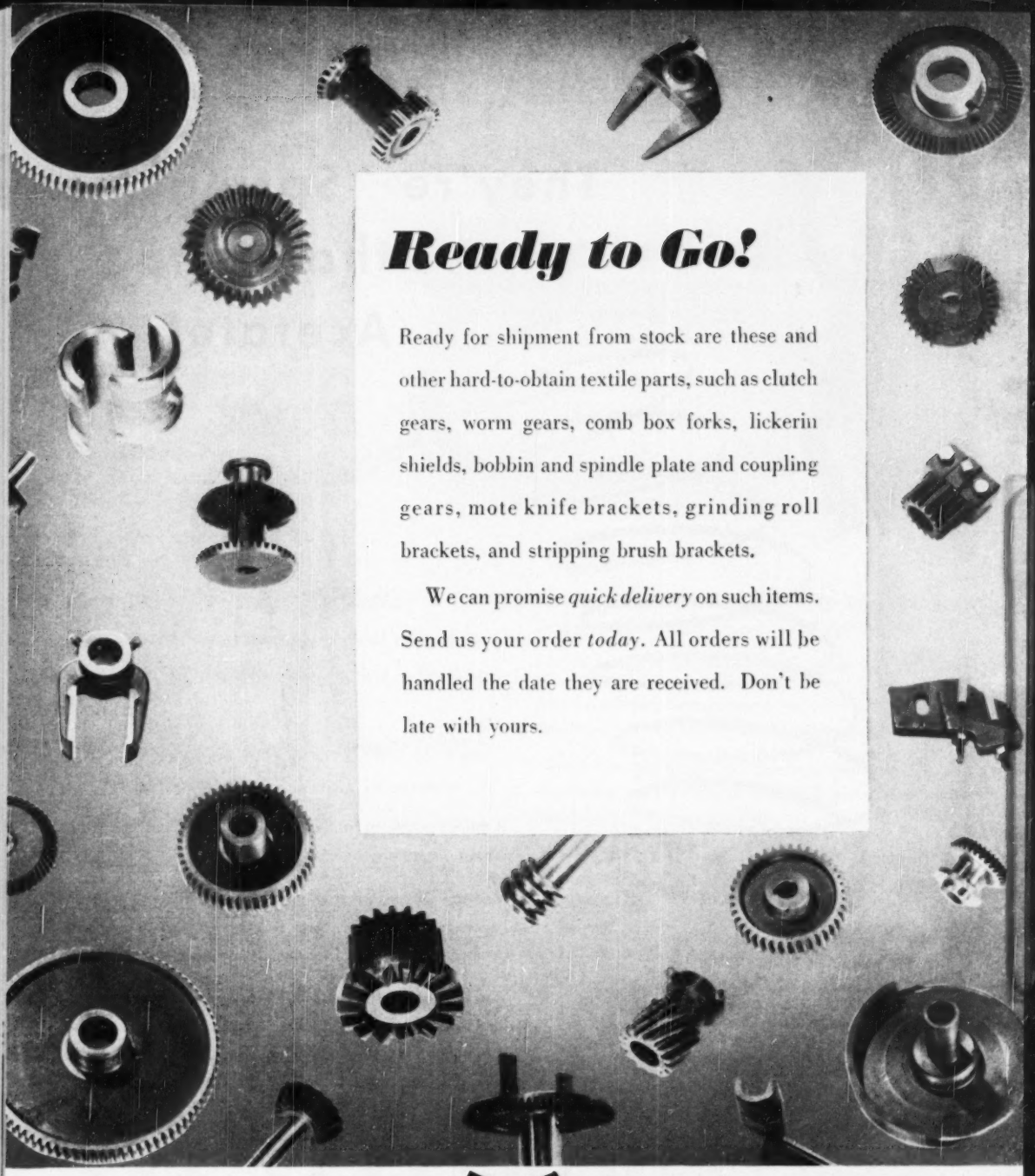

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- **A rich, full hand—perfect comfort with less weight**
- **Unlimited style effects through cross dyeing**
- **Wrinkle-resistance for continued neatness—creases that keep their sharpness**
- **Moth, mold and mildew resistance**
- **High dimensional stability**

If there's one thing that sells rayon suits right off the rack, it's a firm, springy hand.

Men have come to associate the resilient, clear finished rayon fabric not only with wrinkle resistance, but with coolness, dimensional stability, and long wear.

And they're right! For the same Celanese* acetate staple fiber that gives these fabrics their springiness, also contributes to the other qualities that are making rayon suitings so successful.

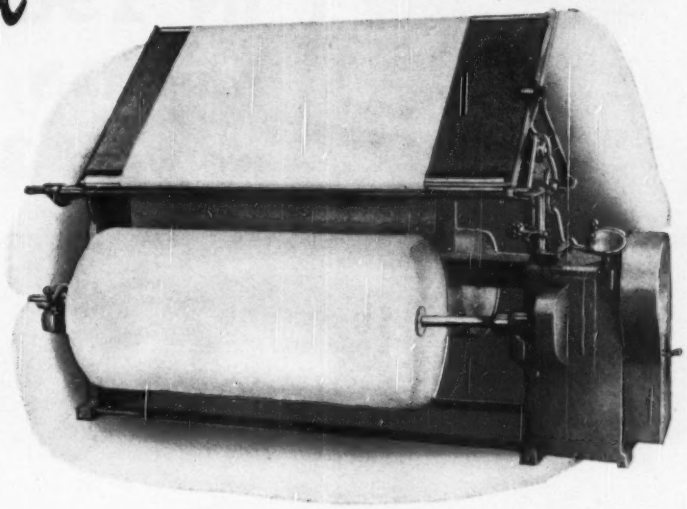
Celanese Corporation of America, 180 Madison Avenue, New York 16.

Available in Canada from Canadian Cellulose Products Limited, Montreal.

Celanese® staple fiber of acetate rayon

*Reg. U. S. Pat. Off.

Preferred BY THOSE IN THE KNOW



When an operator stands at a machine hour after hour, day after day, he knows that machine.

That is why we have carefully checked the reactions of the men and women who are examining on the Van Vlaanderen INSPECT-ALL.

Now, a year after its introduction, we can say definitely that the

Operators prefer the INSPECTALL:

- It is easier and more convenient to operate.
- Better inspecting is possible with less fatigue.

Management also prefers the INSPECTALL:

- Faster and better inspecting is possible.
- Better satisfied customers mean better business.

Here's why this machine is preferred:

It is built to a precision and sturdiness not before available.

Exclusive designed, one-station group control permits easier, faster operation.

Wide-range, variable-speed control is at operator's finger tips.

Instantly reversible, one-motion clutch control can be operated from any examining position.

Let-off brake is controlled from front of machine.

Any fabric can be examined, face or back, because take-ups operate clockwise or counterclockwise.

Center-bar quills are ball-bearing mounted. Opposite end is equipped with new V.V. positive center-bar lock.

The INSPECTALL will handle rolls up to 36″ in diameter. Examining board is 36″ high in 65 or 75 inch widths. Special widths available. Machine is equipped with precision clock—measuring yards and eighths. Ball bearings are used throughout—sealed in for life. Drive is completely enclosed. All guide rolls are hard chrome plated. Oversize disk clutches.

Attachment is available for running tube to tube or shell to tube.

VAN VLAANDEREN

You are invited to see this machine.

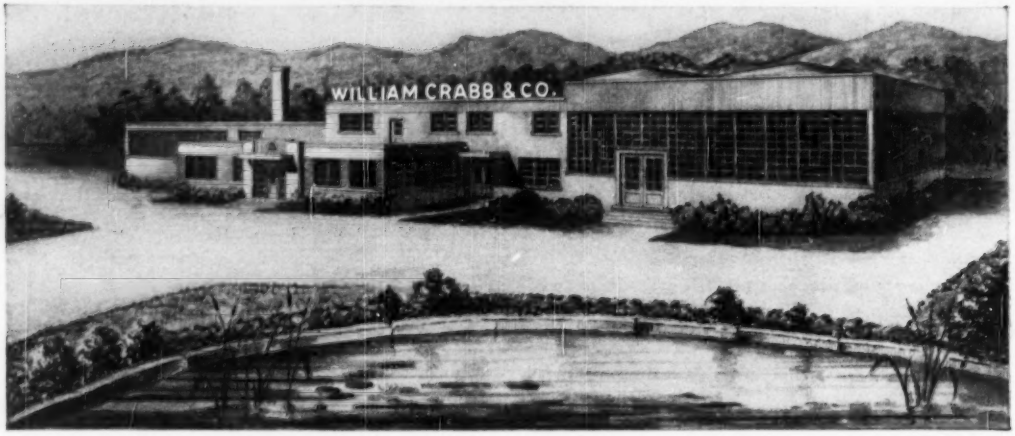
MACHINE COMPANY

370 Straight Street, Paterson 3, New Jersey

World's largest manufacturer of machines for processing modern fabrics

COMB CIRCLES
Fallers and Gills.
and all kinds of GILL COMB and CARD PINS, and PICKER TEETH.
WILLIAM CRABB & CO., Newark, N. J.

IN 1900
when this ad appeared...
we were 30 years old!



OUR NEW PLANT-JUNE 1ST. 1950

● ***FOR BETTER SERVICE TO THE TEXTILE INDUSTRY***

The Crabb reputation rests on the continuing and improving QUALITY of our service to the textile industry, not simply on our being 80 years in business. Now—today—as never before, we are equipped to render even BETTER service, supplying Pins, Lags, Aprons and Cylinders. Located near Asheville, N. C., our modern steel heat treating plant is equipped with both salt and oil hardening facilities for the usual high carbon-steels—*plus equipment to heat-treat and passivate STAINLESS STEEL of the 400 series.* For tempering, 4 Leeds Northrup Micromax-controlled Homos are installed. The manufacture of aprons now completes our line; and we are testing a new shredding and bale breaking machine.

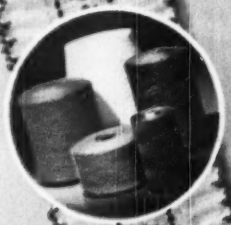
WILLIAM CRABB & CO.
P. O. BOX 95A
Black Mountain
NORTH CAROLINA

COLOR SELLS TEXTILES

Quality KEEPS *Them Sold*

Quality in yarn dyed fabrics begins and ends with COLOR. Lacking quality there, all other quality is futile. Make sure you get the best in yarn dyeing. Use Franklin Process Colors.

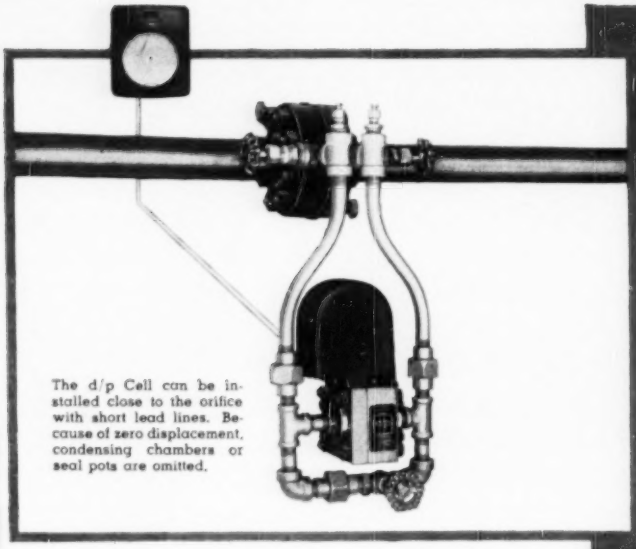
You'll be with the majority.



Franklin Process

Largest Package Dyers in the World

PROVIDENCE • PHILADELPHIA
GREENVILLE • CHATTANOOGA
New York Representative — 40 Worth Street



The d/p Cell can be installed close to the orifice with short lead lines. Because of zero displacement, condensing chambers or seal pots are omitted.

Simpler Flow Measurement

in the palm of your hand

NEW • REVOLUTIONARY • MERCURY-LESS

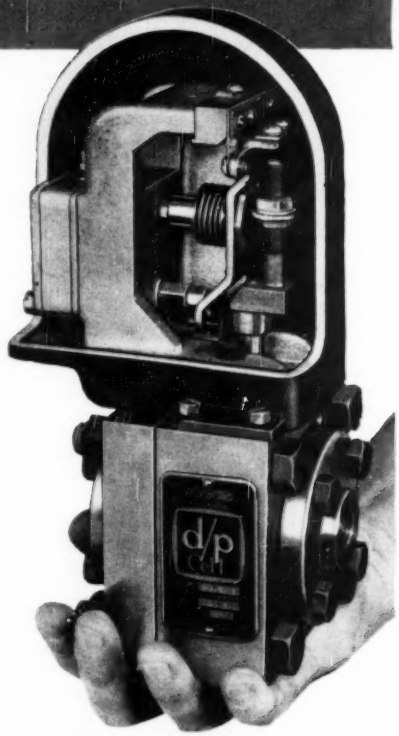
FOXBORO

DIFFERENTIAL PRESSURE CELL

Now you can simplify many troublesome flow problems . . . especially those where corrosion is a factor or the use of mercury is objectionable. This unique flow measuring device is accurate, easily calibrated, and widely applicable, and it weighs only 20 lbs. The Foxboro d/p Cell offers a combination of advantages that no other type of flow measurement can duplicate.

The Foxboro d/p Cell operates on the highly-accurate force-balance principle, transmitting flow measurement to remote, conveniently-located pneumatic receiving instruments (indicating, recording, controlling). Range: 80 in. to 800 in. H_2O. Working pressures: 750 psi and 1500 psi.

Get all the facts about this revolutionary new device for the measurement of liquid, steam, gas or air flow. Write for Bulletin 420. **The Foxboro Company, 182 Neponset Ave., Foxboro, Mass., U. S. A.**

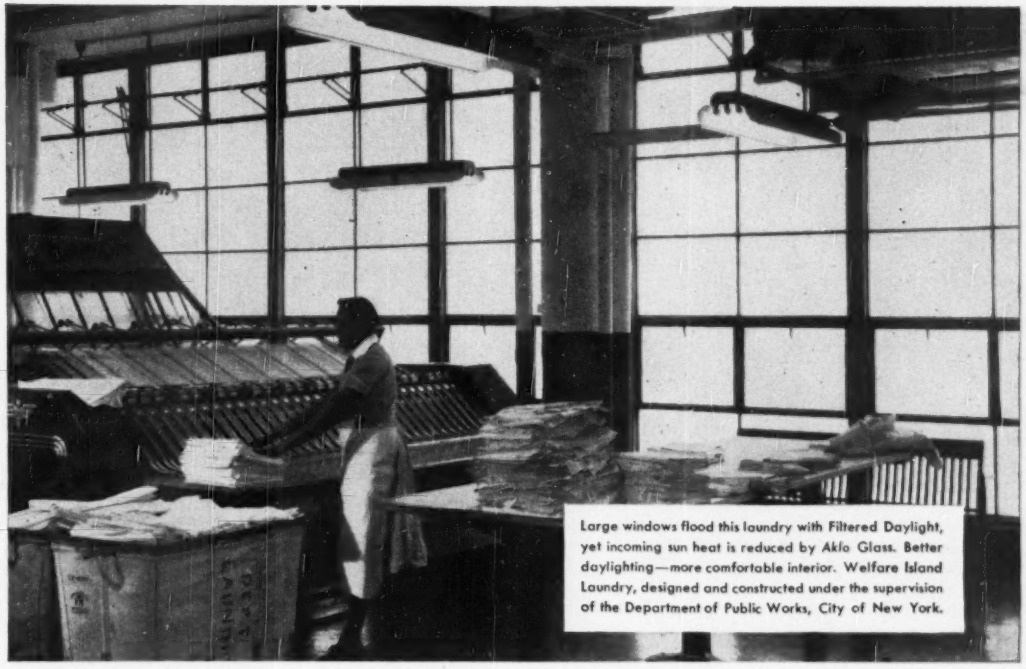


UNIQUE ADVANTAGES

1. Type 316 Stainless Steel Construction.
2. Uses no mercury.
3. Essentially zero displacement — no need for condensing chambers on steam measurement or seal pots on liquid measurement.
4. Immediate, unfailing response to differential pressure changes.
5. Positive overrange protection.
6. Easy zero and range adjustments.

FOXBORO
REG. U. S. PAT. OFF.

RECORDING · CONTROLLING · INDICATING INSTRUMENTS



Large windows flood this laundry with Filtered Daylight, yet incoming sun heat is reduced by Aklo Glass. Better daylighting—more comfortable interior. Welfare Island Laundry, designed and constructed under the supervision of the Department of Public Works, City of New York.

How FILTERED DAYLIGHT improves working conditions

Windows can do more for you than just bring in daylight. They can *filter* that daylight to give you the most desirable portions of the sun's visible rays. Plants all over the country are using Blue Ridge Frosted *Aklo** Glass for:

1. Better Seeing—This blue-green glass transmits that portion of the spectrum most restful to the eyes. Frosted *Aklo* Glass provides more uniformly diffused daylight, with subdued brightness. This means less eye fatigue, happier personnel, improved quality of work and reduced danger of accidents.

2. Greater Comfort—*Aklo* Glass absorbs a high majority of the heat-loaded infrared rays of the sun and reradiates much of this heat externally. Thus, interiors are cooler, workers are more comfortable.

3. Better Temperature Control—*Aklo's* reduction of sun heat permits more accurate control of indoor temperatures and humidities. It effectively reduces load on air-conditioning equipment.

Aklo is made by the Blue Ridge Glass Corporation of Kingsport, Tennessee, and sold by Libbey-Owens-Ford glass distributors. To see for yourself how Frosted *Aklo* Glass reduces glare and sun heat, ask your distributor for a Radiometer demonstration. *®

Free Book on Reduction of Sun Glare and Heat

Blue Ridge Sales Division
Libbey-Owens-Ford Glass Company
9475 Nicholas Building, Toledo 3, Ohio

Please send me a copy of your book on glare and heat reduction, "Filtered Daylight".

Name_____

Company_____

Address_____

BLUE RIDGE GLASS CORP. KINGSPORT, TENN. QUALITY GLASS

BLUE RIDGE AKLO GLASS

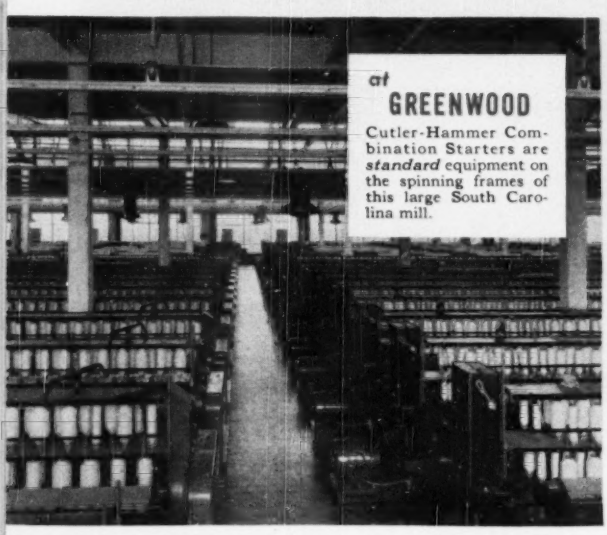
LOF GLASS

Heat Absorbing • Glare Reducing • Figured and Wire Glass

PERKINS
HOLYOKE
TRADE MARK REG.
SYMBOL of
HIGHEST QUALITY
B. F. PERKINS & SON, Inc.
ENGINEERS AND MANUFACTURERS
HOLYOKE, MASS.
LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

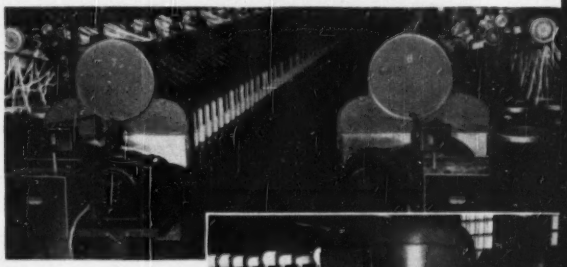
CUTLER-HAMMER

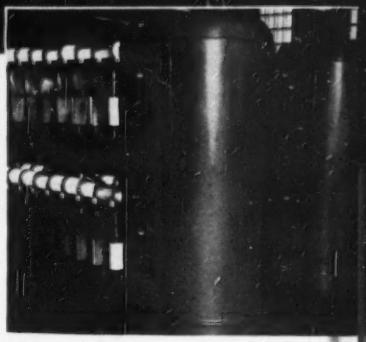
MOTOR CONTROL FOR THE TEXTILE INDUSTRY



at
GREENWOOD

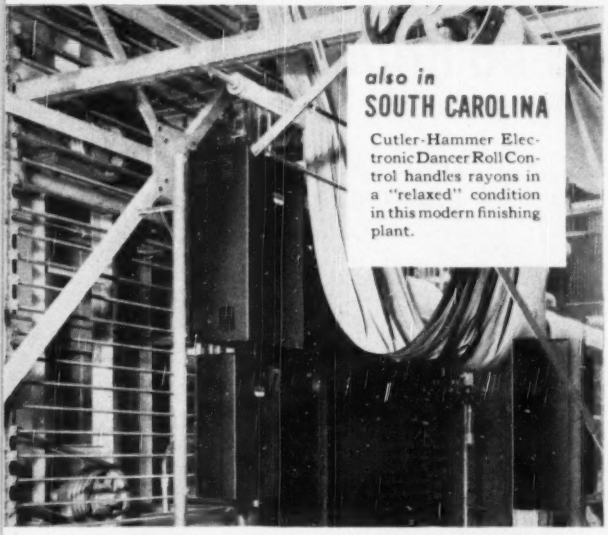
Cutler-Hammer Combination Starters are *standard* equipment on the spinning frames of this large South Carolina mill.





for
WAUMBEC

at Manchester, N. H. Cutler-Hammer Push-button Manual Starters on uptwisters and Primary Resistor Type Magnetic Starters on roving frames. Cutler-Hammer control also used on looms and spinning frames in this great mill.



also in
SOUTH CAROLINA

Cutler-Hammer Electronic Dancer Roll Control handles rayons in a "relaxed" condition in this modern finishing plant.

CUTLER-HAMMER LOOM SWITCH

for fewer shutdowns, greater production, easier maintenance

Pushbutton operation—an achievement for this type of starter. Stop button can be padlocked.

Stronger, smaller, drawn steel case. Unique welded-steel mounting pedestal available to create a *complete* assembly with unparalleled resistance to mechanical shock.

Lint-proof enclosure—close fitting cover (even around pushbutton well) prevents entrance of lint and dust.

Service proven, positive make, quick break operating mechanism built on *steel* framework.

"Out in the open" contacts for quicker inspection and easy renewal *on the job*. Most dependable overload protection—famous Cutler-Hammer eutectic element type—prevents unnecessary shutdowns without sacrifice of *positive* motor protection.

Vibration resistant. Mechanism "floats" in truly effective *live rubber* mounting bushings.

Look Behind the Label If You Want the Most From Your Plant

Every experienced textile man knows that his real investment lies *not* in the row upon row of machines in his plant . . . but in the uninterrupted operation of this equipment at peak efficiency. And if he knows *that*, he is also keenly aware of the part motor control plays in "keeping things humming." For motor control is the connecting link that permits men, motors and machines to function together as one highly efficient unit.

The selection of this important link *cannot* be left to chance, nor to mere enumeration of dimensions and ratings. And so, textile men with keen vision look beyond the control itself, to truly significant factors such as Cutler-Hammer's *record specialization* in the field of motor control. Not only has this 58 year specialization contributed much to the dependability of the electric motor drives of today, but the "know-how" gained in the solution of *tough* problems for *all* industry contributes a great deal to the efficiency and dependability of Cutler-Hammer control for the Textile Industry. That is why a larger and larger proportion of textile mill men are looking *behind* the label, focusing upon the all-important question of who built the control, insisting upon Cutler-Hammer, and refusing all substitutes. CUTLER-HAMMER, Inc., 1456 St. Paul Ave., Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H

Exhibit of both Amco ductless and duct systems at American Textile Machinery Exposition at Atlantic City

We can afford to be impartial

It should be a relief to you to know that when you ask the advice of an Amco engineer on the humidification and cooling system best suited for a particular room or for your entire mill, you will get from him sound, impartial advice.

Having both ductless and duct systems to offer, he can give you unbiased recommendations. If you already have a modern, efficient humidification system and seek to add COOLING he will probably point out to you the advantages of an Amco ductless system in which you discard nothing and make only a modest addition to your present humidification system.

On the other hand, if your proposed installation calls for a unit duct or a central station air conditioning system, Amco can handle the job.

In either case you will get reliable, unbiased advice and expert installation of a system tailored exactly to your needs. Wouldn't now be a good time to call an Amco engineer?

AMCO

HUMIDIFICATION AND COOLING

AMERICAN MOISTENING CO., AFFILIATED WITH GRINNELL COMPANY, INC., PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE

made of
Durene*
multi-ply mercerized combed cotton yarn
WAYS BETTER
than ordinary cotton yarns
EXTRA COMFORT
more absorbent
EXTRA STRENGTH
longer wear
EXTRA QUALITY
lasting lustre
EXTRA SERVICE
easy to wash

*Reg. U.S. Pat. Off.

STANDARD Durene
YARN 120/2 GSD
OPR. 152
LOT 23659
S-C-T
It's smoother knitting and weaving... easier selling, too, with STANDARD Durene on your machines...

...quality-controlled mercerized combed cotton yarn

Standard Durene perks up your production... yields more lustrous, sturdier, easier selling knit and woven goods. Ask for trial run today. 10's to 120's ply, natural, bleached, dyed.

STANDARD DURENE S-C-T COTTON INDUSTRIAL THREADS

Standard-Coosa-Thatcher Co.

CHATTANOOGA 1, TENN.

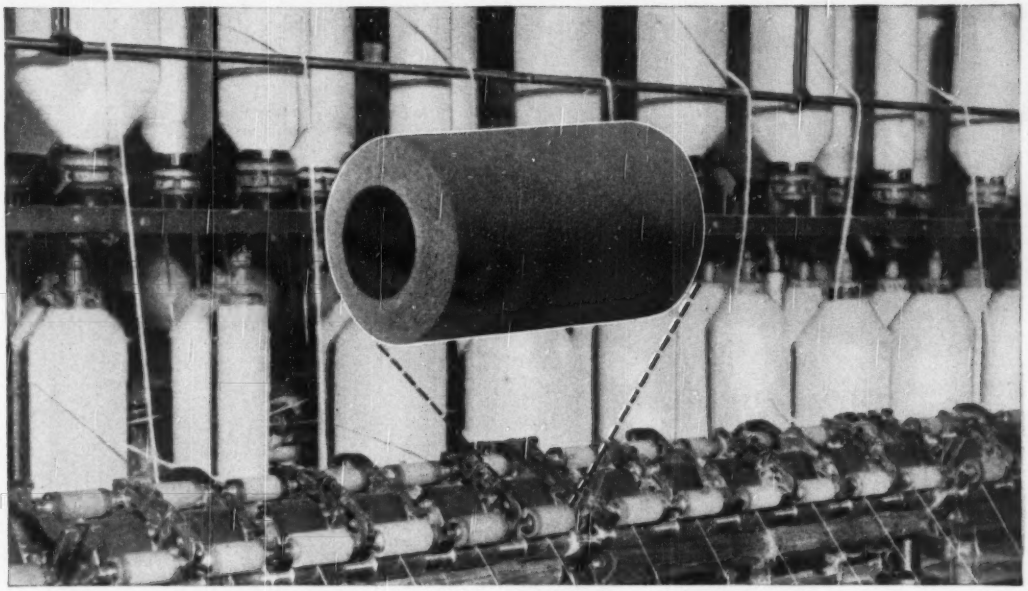
Philadelphia 9, Pa.	New York 16, N. Y.	Chicago 54, Ill.	Greensboro, N. C.	Reading, Pa.	Utica, N. Y.
123 S. Broad St.	185 Madison Ave.	Merchandise Mart	Guilford Building	508 Walnut St.	P. O. Box 185

Representatives in Canada, Central and South America

taken for granted

Perhaps the highest compliment that could be paid to Standard Oil Lubricants is the fact that their dependability and uniformity is taken for granted by the textile industry of the South. ... Management men concerned with production *know,* from years of first-hand experience, that Standard Oil Lubricants can be depended upon to reduce power losses, hold down maintenance and lubrication costs, and lengthen machinery life. ... From more than sixty years of service to the industry, Standard Oil has acquired an experienced understanding of specialized textile lubrication needs. This desirable know-how is available to you through your Standard Oil representative.

STANDARD OIL COMPANY (KENTUCKY)



This low-cost cot gives real spinning economy

Low initial cost, together with easy maintenance and installation, makes Armstrong's Cork Cots a really economical roll cover to use on your frames.

The low first cost of cork cots—actually less than any other roll cover—saves money whenever you buy cots. It also keeps your inventory investment in roll covering materials to a minimum.

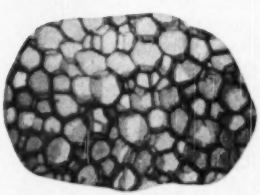
Another important saving with cork cots is their easy maintenance. Instead of a costly re-covering job every time cots become worn, cork covered rolls can be buffed like new for but a few cents per roll.

When Armstrong's Cork Cots finally need replacing, usually after 2 to 3 years of front line service, they'll reduce roll shop labor charges. They are supplied seamless, preglued, and cut to the size of your rolls. Thus, roll shop mechanics can slip them on in one simple operation.

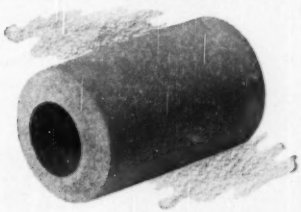
Let Armstrong's Cork Cots prove themselves in your own mill. Your Armstrong representative will gladly arrange for a trial installation. He can also supply you with prices and further information. Call him today or write Armstrong Cork Company, Textile Products Dept., 3607 Arch St., Lancaster, Penna. Available for export.

ARMSTRONG'S CORK COTS

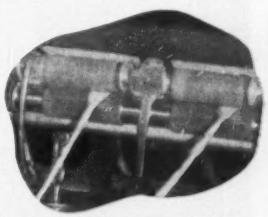
for high-quality spinning . . . at low cost



SUPERIOR FRICTION — Here (magnified 1200 times) are the tiny cork cells that give cork cots high friction.

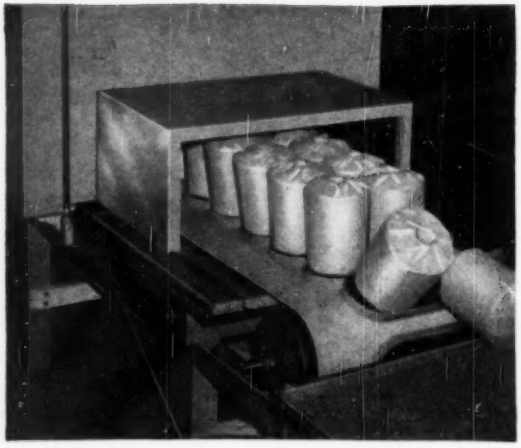


SEAMLESS—Extruded in one piece, Armstrong's Cork Cots have no seams to cause premature failure in service.



NON-EYEBROWING—These cots carry waste fibers well back under the clearers and reduce waste up to 50%.

Quick-Clean TEXTILE MOTOR



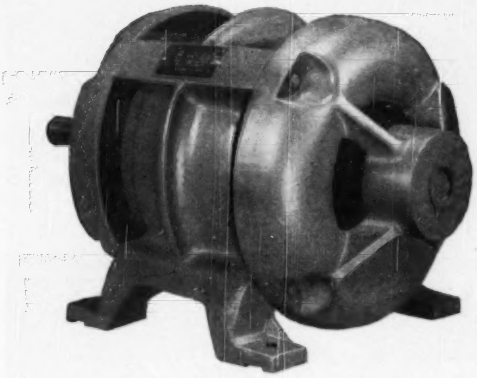
Faster Cake Drying and Twist Setting

Cutting cake drying and twist setting time in rayon mills is only one of the many advantages of Allis-Chalmers Dielectric Heaters. Because each strand is heated from the inside, heating and drying are uniform throughout the package. Quality is greatly improved. Large ovens and drying rooms are eliminated. You can increase capacity in the same floor space. Stock in process is reduced. Engineering and cost studies made without obligation. Ask your nearest Allis-Chalmers Sales Office or write the factory.

ALLIS-CHALMERS, 1054A SO. 70 ST.
MILWAUKEE, WIS.

Quick-Clean, Texrope and *Vari-Pitch* are Allis-Chalmers trademarks.

LINT BLOWS RIGHT THROUGH



Quick-Clean motor cuts maintenance 3 ways

1 FREQUENT CLEANING NOT NEEDED. Wide open design allows two ventilating fans to pull air into the *Quick-Clean* motor and push it right out again carrying all lint and dirt with it. All surfaces are smooth and hard; no crevices in which dirt can collect.

2 ALIGNMENT IS RIGIDLY MAINTAINED by cast iron frame which provides strong support for motor parts without interfering with air flow. Bearings are held in alignment throughout motor life.

3 BEARINGS ARE SEALED which eliminates usual expensive bearing maintenance procedures. Cannot be over or under lubricated. Will not throw grease or oil which would collect dirt or soil product. Lint or dirt cannot enter bearing.

Get more information on the *Quick-Clean* textile motor and what it can mean in low maintenance costs in your mill. Ask your nearest Allis-Chalmers Sales Office.

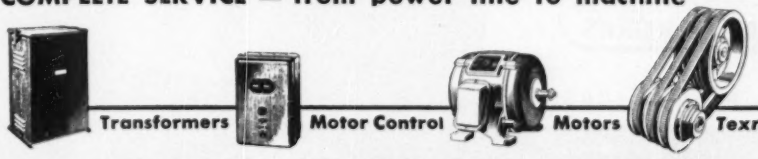
MATCH QUICK-CLEAN MOTORS WITH A-C STARTERS

This control was developed especially for dependable, safe starting of Quick-Clean motors. Other Allis-Chalmers control will give you dependable operation of all electrical equipment in your plant. Competent application engineers are always available at your nearby Allis-Chalmers Sales Office.

Send for Free Engineering Literature

Allis-Chalmers Loom Motors	51B7111	Power Generating Equipment, Transformers, Circuit Breakers, Power Distribution Equipment	25B6150
Texrope Drives	20B6051		
Vari-Pitch Automatic Sheave	20B7223		
Dielectric Heater	15B6431		

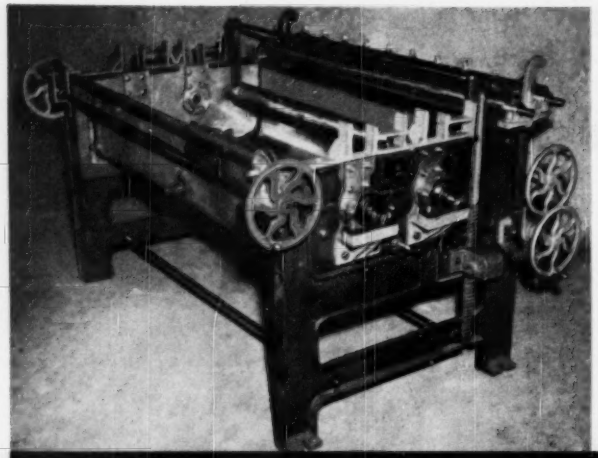
COMPLETE SERVICE — from power line to machine



ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry

A-3060



STAINLESS STEEL
Size Boxes

Pictured left, modern, corrosion-resistant, stainless steel vats or size boxes eliminate shut-downs for repair and maintenance. Coils, rollers and thread guides are part of Sims' stainless fabrication.

STAINLESS STEEL
Kettles

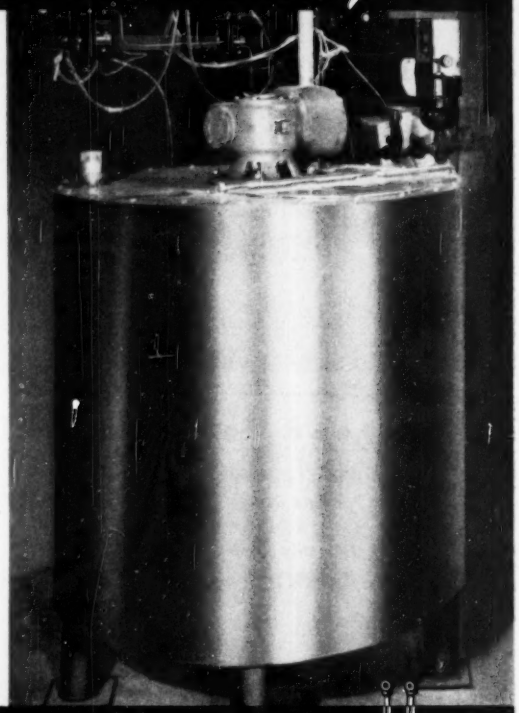
Below, Sims Solid Stainless Steel Size Kettle cannot corrode around fittings. Reduces maintenance costs. Conical bottom for easy cleaning.

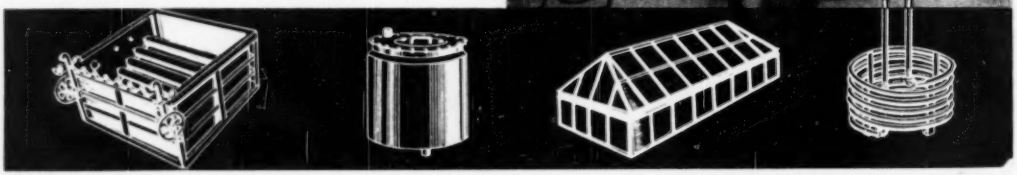
ANOTHER *Sims* CUSTOM TAILORED JOB FOR *Southern Industry*

Corrosion is an expensive luxury! It means shut-downs for repairs, relining or, more often, complete replacement. Sims "Custom Tailors of Stainless Steel" continually apply engineering design and production ability to eliminate or reduce materially corrosive effects on equipment. Illustrated above are two typical corrosion-resistant products. **But,** complete replacement is often unnecessary. Sims "Custom Tailors" can step in and replace corroded linings, vats or fittings with stainless steel, or other alloy, parts. Call our engineers TODAY. Sims will be glad to make a survey of your equipment, and give you an estimate on complete **modernization,** tailored to fit YOUR plant and needs.

Write for "Stainless Steel Fabrication"—the complete story of Custom Tailoring by Sims.

Sims
METAL WORKS
WEST POINT, GEORGIA





ALUMINUM TRUCKS at Covington Mills mind neither heat nor humidity

- light weight
- non-staining
- no red rust
- eliminate painting
- high strength
- non-splintering

No warping — no repairs — no rust stained yarns, that's why Covington Mills of Covington, Ga., uses yarn conditioning trucks of Alcoa Aluminum. Even at relative humidities of 90% and temperatures of 180°F., these trucks never need paint or repairs. And workers like the effortless way they handle.

You'd expect these lighter, better trucks to cost much more than steel or wood ones. Yet the prices are competitive.

Want to know who makes aluminum trucks? Mail the coupon below to: ALUMINUM COMPANY OF AMERICA, 1990G Gulf Bldg., Pittsburgh 19, Pa.

ALCOA
FIRST IN
ALUMINUM

Gentlemen:
Please send a list of manufacturers making textile materials handling trucks of Alcoa Aluminum.

Name_____

Title_____

Company_____

Address_____

NO MORE *TIPPY* WOOL

with

ANTHOMINE*

on the job!

IN ALL WOOL DYEING OPERATIONS *ANTHOMINE* INCREASES THE AFFINITY OF WOOL FIBRES FOR DYESTUFFS.

THIS RESULTS IN LEVEL SHADES WHEN DYEING STOCK, YARN OR PIECE GOODS.

TIPPY AND BLENDED WOOLS ARE DYED A SOLID SHADE BY ADDING *ANTHOMINE* TO THE DYE BATH.

Mills throughout the country use* ANTHOMINE *for:

- Even dyeing
- Brighter, fuller shades
- Quicker, better exhaustion of dyebath
- Softer, more pleasing "hand"
- Reduced processing time

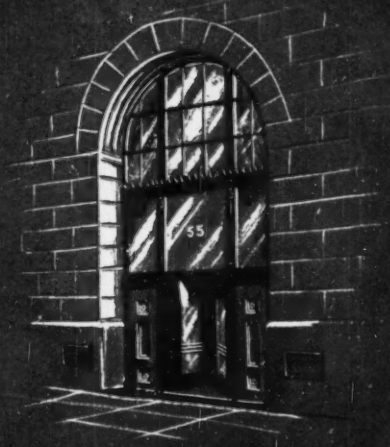
Send for Technical Service Bulletin #203-100.2 for complete information, including how to use ANTHOMINE for Top and Yarn Dyeing, Pressure or Package Dyeing, Leveling Unevenly Dyed Yarn or Shady Pieces, Dyeing Metallized Colors, etc.

Arkansas Co. INC.

Manufacturers of Industrial Chemicals for Over 40 Years

NEWARK, NEW JERSEY

*Reg. U.S. Pat. Off.



TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

may we serve you, too?

...Warp Sizes for Natural and Synthetic Fibers
...Starches, Dextrines, Gums and Resins for Finishing
...Printing Thickeners for All Types of Colors.

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STEIN HALL
285 MADISON AVENUE NEW YORK 17, N. Y.

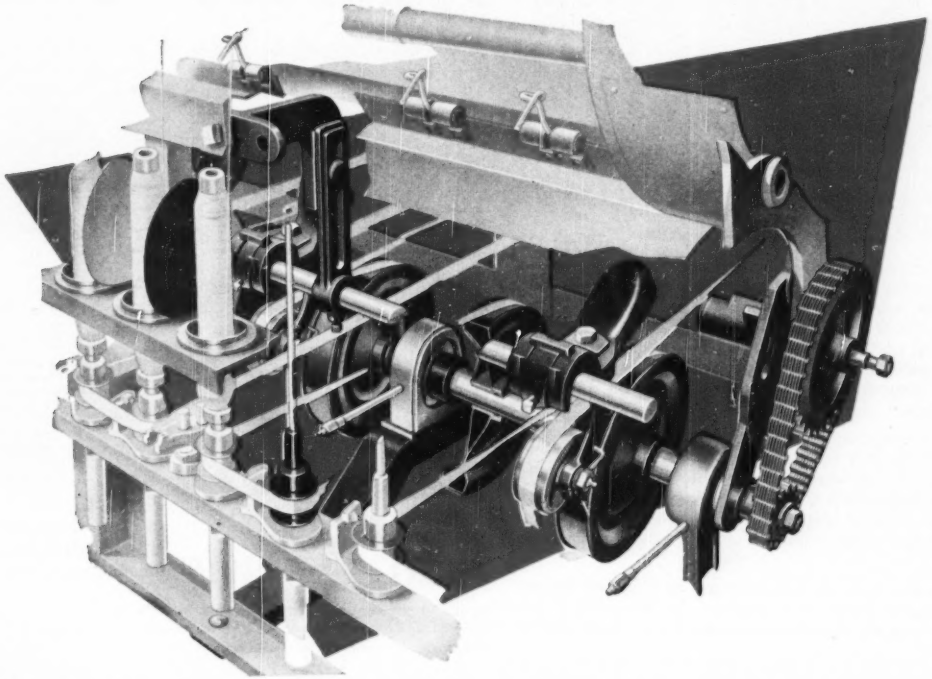
8,000,000 SPINDLES
producing more and better yarn — with *MEADOWS TENSION PULLEYS*

YES, IT'S A FACT! More than 8 million spindles are today turning out *more* and *better* yarn through being equipped with Meadows Ball Bearing Tension Pulleys. Yet this increased quality and production is being achieved at *lower cost* because Meadows Ball Bearing Tension Pulleys use less power and never drag by becoming choked with lint or dirt.

Your present frames, either band or tape driven, can be made competitive with new frames by rebuilding with Meadows Conversions and equipping with Meadows Pulleys. This Conversion includes silent chain drive, ball bearing jack studs, individual driving pulleys, high-strength ground and polished shafting (mounted on heavy-duty ball bearings), and ball bearing tape tension pulley assemblies . . . Don't let old equipment pull down production and profits another minute! Investigate the possibilities of *modernizing* with Meadows Conversions.

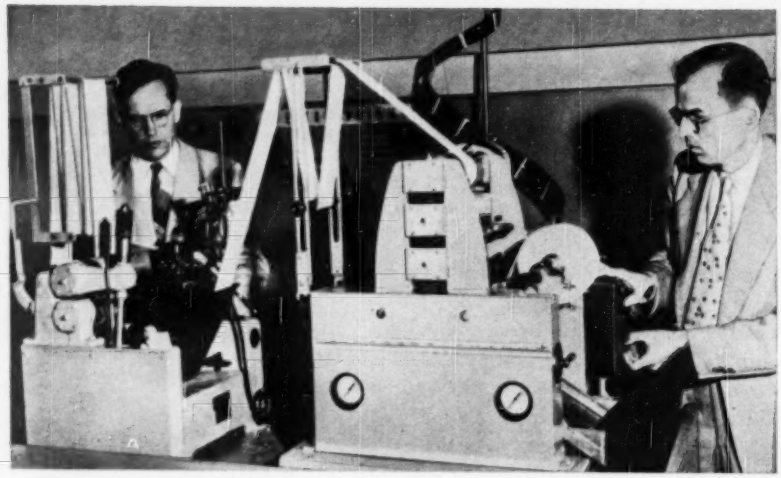
We engineer and service each installation, design and manufacture all parts. We will be glad to have a representative survey and estimate your frames without obligation, within their territories.

- Fewer Ends Down!
- No More Heads to Jerk Out!
- No More Cylinder Trouble
- Less Vibration!
- Uniform Speed and Twist!
- Better Package-More Yarn!



MEADOWS MANUFACTURING COMPANY • ATLANTA, GEORGIA

Representatives: **JAMES P. COLEMAN, P.O. Box 1351, Greenville, South Carolina • WALTER S. COLEMAN, P.O. Box 722, Salisbury, North Carolina • MATTHEWS EQUIPMENT COMPANY, 93-A Broadway, Providence, Rhode Island • R. L. HOLLOWAY, Atlanta, Georgia**



Continuous dyeing unit used in dye research at the laboratories of Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J. The pad box, in the unit at left, is made of corrosion-resistant Inconel.

CALCO LAB STUDIES SHOW *INCONEL* BEST FOR HANDLING DYE SOLUTIONS

"We have used Inconel . . . and consider it the best material we know of for preventing discoloration or metal pickup in dyeing . . .

"Previous tests on dyes by our metallurgists have shown that Inconel has less effect on the dye product than any other material we have tried except glass."

The quotation above is from a report made by the metallurgist of the Calco Chemical Division, American Cyanamid Company at Bound Brook, New Jersey.

In well-equipped laboratories, Calco research men are constantly studying the many complex problems of dye production and use. To facilitate these studies, ingeniously-designed laboratory equipment simulates actual production methods. Included in this equipment is apparatus for continuous dyeing, which permits studies of color matching, shade changes, and ideal dye bath composition.

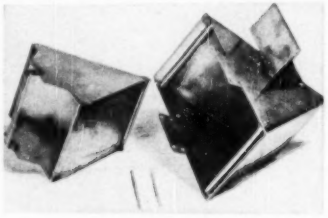
In developing this equipment, Calco designers had to overcome certain problems in materials selection . . . especially for the vital pad box which contains the dye solutions. In their own words: *"We wanted particularly to obtain freedom from rust contamination and iron pickup, since these adversely affect the shade of some dyes."*

Pad boxes made of Inconel® solved this problem to Calco's satisfaction. But that is not surprising, for Inconel is highly resistant to corrosion by most textile dyestuffs.

Still other advantages . . . Inconel can be readily fabricated . . . can be welded, brazed, or soldered. Welds in Inconel are as fully corrosion-resistant as the parent alloy itself.

Inconel is easy to buy, too. Your nearest Inco distributor stocks it in all standard mill forms.

Write, today, for full engineering information and sources of supply. Remember, too, that our Technical Service Department is always ready to help you solve application problems.



Component parts of a pad box, used in continuous dyeing apparatus at Calco Chemicals Division laboratories. They are made of Inconel to minimize metal pickup and stop rust-fouling of dye solutions.

EMBLEM OF SERVICE

NICKEL INCO ALLOYS

TRADE MARK

MONEL® • "K"® MONEL • "R"® MONEL • "KR"® MONEL
INCONEL® • NICKEL • "D"® NICKEL • "L"® NICKEL
DURANICKEL® • PERMANICKEL® • INCONEL "X"®

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

SANDOZ PRESENTS *The color achievement of the month*

Suntan Beige ...by magee

Her mood is your challenge. And today her mood is a preference for carpets of light shades like The Magee Carpet Company's "Rubicon" shown above.

This creates a problem for dyers. Recognizing the need for the brightest and fastest-to-light dyestuffs, many of them depend on such Sandoz colors as

BRILLIANT ALIZARINE LIGHT BLUE 3F Pat.

XYLENE FAST RUBINE 3GP Pat.
XYLENE FAST RED 6BL
XYLENE LIGHT YELLOW 2G

All of these colors retain their full brightness during processing, are exceptionally level-dyeing for light shades, and promise the ultimate customer an extremely high degree of light fastness.

And for any chrome, acid or direct dyes . . . or auxiliary chemicals . . . and for both natural and synthetic fibres . . . be guided by the successful "color achievements" you see in these Sandoz advertisements.

DIRECT-DYE COTTON AND RAYON WITH CUPROFIX FOR WASH FASTNESS

New CUPROFIX colors and after-treatment give fastness to washing, light, etc., that formerly required more expensive vat dyeing. Write for booklet on CUPROFIX, already adopted by dozens of mills.

SANDOZ CHEMICAL WORKS, INC., 61 VAN DAM STREET, NEW YORK 13, N. Y.

Application laboratories and stocks at Boston, Philadelphia, Charlotte, Chicago, Los Angeles, Toronto • Other branches at Providence, Paterson and Montreal

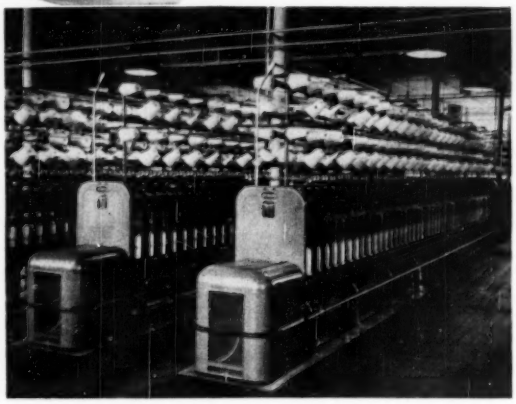
SANDOZ *thinks ahead with textiles*

Your choice of

Takeup

various plies, turns, types of package...

Atwood Model 10 is the truly *all-purpose* ring twister, having unmatched *flexibility*. With various builders having traverses up to 8 in., it produces taper-top, double-taper or straight-wind bobbins weighing up to 2 lbs., depending on the yarn. It can accommodate up to 12 ends with individual stop motions for each end. Twist range is from 1 to 55 turns. Ring sizes of 4¾ in. can be used on machines with 7 in. spacing. Spindles may be Atwood plain-bearing or Atwood roller-bearing.



When twisting

Any Yarns

natural or synthetic from any supply

These versatile ring twisters are now being used for a variety of work that includes zero twist acetate, spun rayon, nylon, cotton, worsted, glass and combinations. Delivery may be from cones, tubes, cheeses, cakes, pirns, spools or bobbins. Creels are built to mill specification with magazine features for stationary supply. Tension can be varied for each individual end to produce a variety of fabric effects.

UNIVERSAL WINDING COMPANY

ATWOOD DIVISION

P. O. Box 1605, Providence 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

Model 10 *automatic stop motion for each end and ply*

One SURE way

TO CUT MILL VILLAGE UPKEEP COSTS

High-quality, Sherwin-Williams Mill Village Paints offer one SURE way to get full protective value for every dollar spent for maintenance in your mill village.

They are specially developed to meet the most exacting upkeep requirements of both the plant and village. They provide a choice of attractive yet practical colors in top quality paint. CONTROLLED WEATHERING gives longer lasting beauty and protection. HIGH COVERAGE and EASY APPLICATION without sags or brush marks insure lowest possible unit cost.

You'll find everything you're looking for in the complete line of Sherwin-Williams Exterior and Interior Mill Village Finishes, including Xtage Undercoater for uniforming the surface for final coat of Exterior Paint; Velvet Flat and Velvet Enamel for interior walls and trim of village houses; and Save-Lite White and Color Harmony Finishes for the interior of the mill itself.

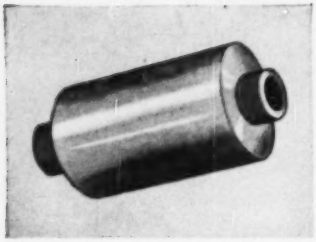
Ask for color cards and prices. The Sherwin-Williams Co., Charlotte, N. C., Atlanta, Ga., and Cleveland, Ohio.

● WRITE FOR COPY of color card showing Sherwin-Williams Mill Village Paint colors for exterior and interior work.

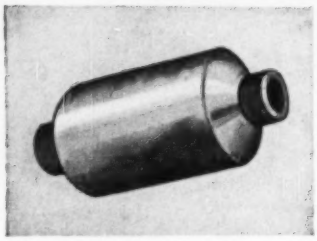
SHERWIN-WILLIAMS

INDUSTRIAL MAINTENANCE FINISHES

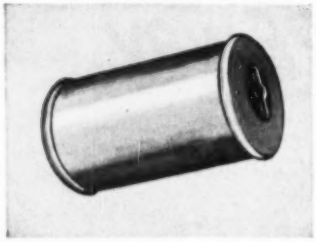
SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES • MILL VILLAGE PAINTS



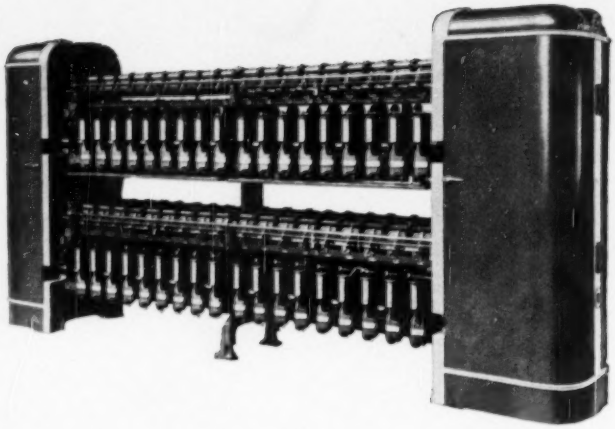
PERFECT PARALLEL CHEESES



(tapered ends if desired) OR



DOUBLE FLANGED BOBBINS WOUND on the PLATT MU-1



PLATT'S NEW MU-1

Light Package UPTWISTER

U. S. AND OTHER PATENTS APPLIED FOR

HERE is a brand new uptwister, simplified for easier maintenance, streamlined for higher speeds. The new Platt MU 1 Uptwister, for cheeses or double flanged bobbins, has the design rigidity that allows you to safely push production and the beautiful machining of moving parts that permits these continual high speeds. The patented, flexibly-mounted, roller bearing spindles with swivel-mounted toggle and patented automatic quick brake, allows speeds up to 15,000 r.p.m. with utmost stability and low power consumption. The Platt MU 1 is a double deck machine, each tier driven by separate motors. The top tier being narrower than the bottom, allows an unrestricted view of all packages. Every vital part is automatically lubricated, from traverse gears to twisting gears. Would you like a twenty-page, full color booklet with seven pages of cut-away illustrations of this radically new twister? Write Atkinson, Haserick & Co.

FEATURES

Quiet operation . . . Takes wide range of yarns . . . Builds packages up to 16 ozs. . . . Central pressure lubrication at twist gear end . . . Package cradles independently mounted . . . Bottom row of spindles swung in-out by foot . . . Automatic lubrication of traverse gears . . . Winding angle easily changed . . . Minimum dwell at stroke end . . . Doff taper cheeses without stopping.

MACHINERY OF:

PLATT BROS.

(Sales) Ltd. • Oldham, England

INCLUDING THE MACHINERY OF:

PLATT BROTHERS & CO., LTD. DOBSON & BARLOW, LTD.
HOWARD & BULLOUGH, LTD. BROOKS & DOXEY, LTD.
ASA LEES & CO., LTD.

INQUIRIES TO

SUPER MARKET of the Textile Industry

Atkinson, Haserick & Co.

BUSINESS ESTABLISHED 1823

Textile Machinery Agents and Engineers

211 CONGRESS STREET, BOSTON 6, MASS.
1639 W. MOREHEAD ST., CHARLOTTE, N. C.

IMPROVED DISCHARGE PATTERN

. . . gives Kidde Dry Chemical Extinguisher a 44% margin of safety!

The Factory Mutual Laboratories require that a 20 pound dry chemical extinguisher effectively cover 25 square feet of burning area . . . but the Kidde 20 pounder blanketed 36 square feet . . . gave 44% extra coverage, extra safety!

Insurance rating bureaus favor dry chemical extinguishers for textile fires. Kidde extinguishers of this type are just as quick, sure and efficient for textile blazes as they are for smashing flames in flammable liquids or live electrical equipment. Kidde Trigger-Finger Control lets you just pick up extinguisher, point the horn and pull the trigger. Kidde streamlined diffuser horn gives you improved, cloud-like discharge pattern, greater coverage and a heat-insulating blanket to guard the operator. The dry chemical absorbs heat, smothers flames. When these Kidde units go on, fires go out.

Kidde Dry Chemical Extinguishers in 20 and 30 pound units, are built to last, easy to use, simple to recharge . . . and give you a big margin of safety. Use the right kind of extinguisher to guard *your* plant from fire—use Kidde.

FASTER SURER ACTION!

Kidde

Walter Kidde & Company, 790 Main St., Belleville 9, N. J.
In Canada: Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

It pays

for printers

AN IMPROVED
ARIDYE
BLUE FC2G

for dyers

THE NEW
INTERCHEM ACETATE
BLUE BN

QUALITY

UNIFORMITY

SERVICE

Aridye PIGMENT COLORS

Interchem Dyes
Reg. U.S. Pat. Off.

Interchemical
Textile Colors

Interchemical

Excellent color value and exceptional fastness to crocking—even in heavy shades—are combined in an improved type of Aridye Blue FC2G recently added to the line of Aridye printing colors.

This improved color is considerably stronger than earlier versions of the extra low-crock type of Aridye Blue FC2G. Prints produced with this improved color have the same excellent fastness to light, washing, dry-cleaning, and plissceing.

The improved type of Aridye Blue FC2G is particularly useful in printing dress goods, shirtings, pajama fabrics, draperies, and other fabrics where top fastness is required. It gives fine lines, smooth blotches, sound pegs. Because of its superior properties and its bloom, it permits the printing of deeper shades than have been practicable before with pigment colors on quality fabrics.

Although its widest application is for producing self shades, the improved Aridye Blue FC2G can be combined with other Aridye Low-Crock Pigment Colors to provide a variety of compound shades of outstanding fastness and brilliancy. Printers looking for a quality blue with excellent color value will find it in the improved Aridye Blue FC2G.

An excellent "work horse" for producing deep shades on acetate rayons is the new Interchem Acetate Blue BN. The exceptional pile on and exhaustion of this new dye make it particularly suitable and economical for dyeing navies, browns, greens and other dark shades in which blue is an important component. Interchem Acetate Blue BN is highly recommended also for producing bright, reddish blue self shades.

For dyeing piece goods, Interchem Acetate Blue BN can be applied on either jigs or boxes. It is level dyeing and penetrates well at temperatures of 160—190° F.

Interchem Acetate Blue BN is highly dispersed during manufacture. When pasted with water, it disperses rapidly and completely, leaving no undispersed particles.

Used alone or in combination with other Interchem Acetate Dyes, the new color virtually eliminates dye specks . . . cuts costly redyes and seconds to a minimum.

The improved Aridye Blue FC2G and the new Interchem Acetate Blue BN are two more examples of the many research-born developments of Interchemical's Textile Colors Division—all dedicated to the solution of your color problems. For samples of either of these new products, mail the coupon today.

FILL IN — CLIP — MAIL *Today!*

Interchemical Corporation
Textile Colors Division
Hawthorne, New Jersey

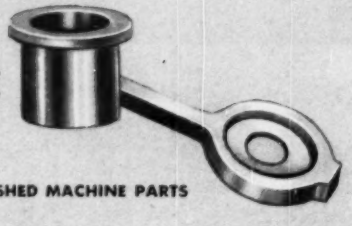
Please send for trial purposes a sample of:

☐ Aridye Blue FC2G
☐ Interchem Acetate Blue BN

NAME.....
TITLE.....
COMPANY.....
STREET.....
CITY.....ZONE.....STATE.....

Color Division

QUALITY



OIL-CUSHIONED BEARINGS

FINISHED MACHINE PARTS

★ 20 years of production experience.
★ New plant and equipment.
★ Virgin materials of highest purity.
★ Recognized management and technical personnel.
★ Electronic inspection devices and quality control.

SERVICE

★ Extensive staff of home office and field engineers.
★ Batteries of presses and other equipment for quick service.
★ Production tools for more than 25,000 different finished products.
★ 3000 additional engineers for consultation on technical problems.
★ Depots in every state and throughout Canada for on the spot service.

PERMANENT FILTERS

CORED AND BAR STOCK

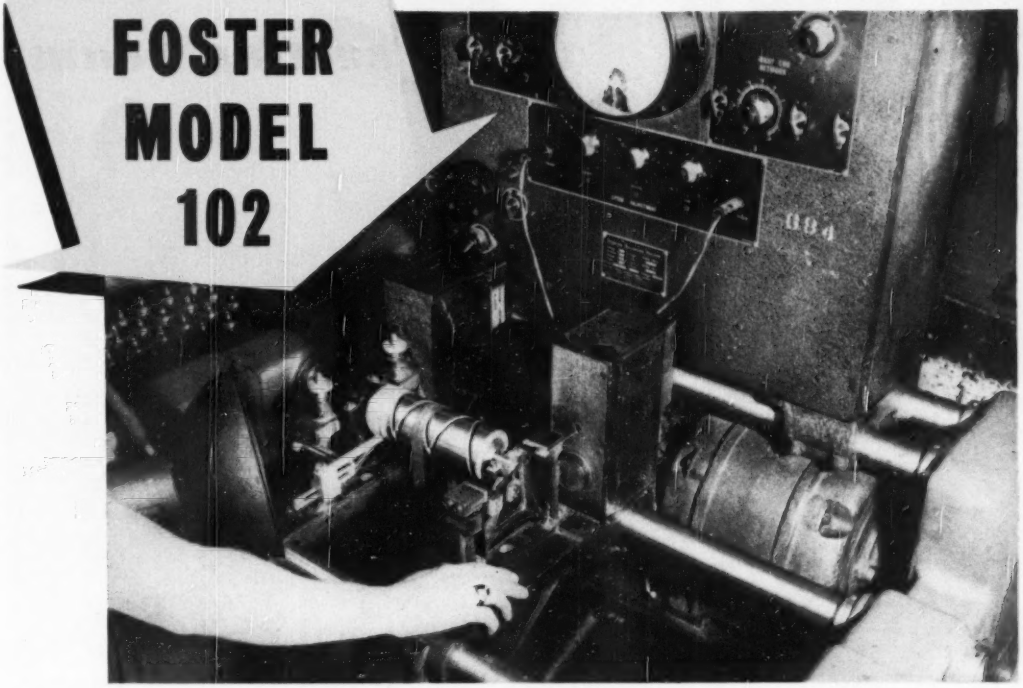
OILITE

AMPLEX MANUFACTURING COMPANY
SUBSIDIARY OF CHRYSLER CORPORATION
DETROIT 31, MICHIGAN

CONTACT OUR LOCAL FIELD ENGINEER OR HOME OFFICE

One Reason Why You Can *Depend* On The

FOSTER MODEL 102



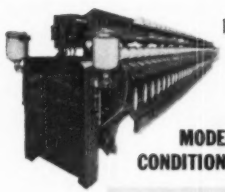
A machine may be perfect in theory and design and yet be a failure, if due care is not exercised in the manufacture of its component parts.

The highest standards of quality have always been maintained by this company in the production of all parts from the largest to the smallest and the production of traversing cams for our Model 102 Winder* is a good example.

After being machined and ground on modern precision equipment these cams are tested for balance on the dynamic balancing machine shown above. This costly and intricate mechanism is electronically operated and indicates immediately if a cam is out of balance and where. No cam, of course, is ever used until it can pass this test.

This is only one of many reasons why you can depend on not only the Model 102, but ALL Foster winders,—to give you high production with low operating cost and minimum outlay for upkeep and repairs.

Our Bulletin A-95 tells you more about the Model 102. It's yours on request.



MODEL 102 WITH CONDITIONING ATTACHMENT

**For winding cotton, mercerized, wool, worsted, merino, spun silk or spun rayon yarns.*

FOSTER MACHINE CO.

WESTFIELD, MASS., U.S.A.

SOUTHERN OFFICE: Johnston Bldg., Charlotte, North Carolina
CANADIAN REPRESENTATIVE:
Ross Whitehead and Company Limited, University Tower Bldg., 660 Ste. Catherine Street, West, Montreal, Quebec
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HAYES giant NEW section beam

Hayes 36" Section Beam 54½" between heads — Weight only 258 lbs. As shown; for Reiner warper. Adapters for Sipp-Eastwood and Cocker Warpers Illustrated.

...holds 50% more yarn than 30" beam

PROVEN IN USE

Proof of the cost-cutting job Hayes beams will do is their record of acceptance in little over four years. Today over 40,000 Hayes light metal beams are in the textile industry.

A SIZE TO FIT YOUR NEEDS

You can obtain Hayes aluminum and magnesium section beams in 26", 28", 30", 32" and the new 36" head diameters. The new giant beam carries a huge yarn load — 50% more than 30" beam — for longer uninterrupted runs.

TRICOT AND LOOM BEAMS, TOO

You can also have the profitable advantage of light metal in tricot beams, regular or adjustable loom beams, and in loom beam replacement barrels for use with cast iron heads. All are engineered for cost-saving production, by Hayes.

BRING YOUR BEAMING PROBLEMS TO HAYES

Let the advantages of Hayes beams work for you. Plan now to convert, through normal replacement, to Hayes light metal beams. Hayes field engineers will be pleased to work with you in planning an economical change-over.

NOW FIVE SIZES . . . choose to fit your production needs
ALWAYS LIGHT METAL . . . cut costs with Hayes design

Mills equipped with Hayes light metal beams have a cost advantage. For light metal beams cut costs.

They cut shipping and handling costs . . . because they weigh one-half or less than conventional beams.

They cut production costs . . . because their balanced true running rigid heads and barrels give uniform selvages and permit faster speeds.

They cut reject costs . . . because of their rust-free, snag-free polished heads and barrels.

Write for information and the Hayes Catalog No. 100

HAYES
INDUSTRIES, INC.

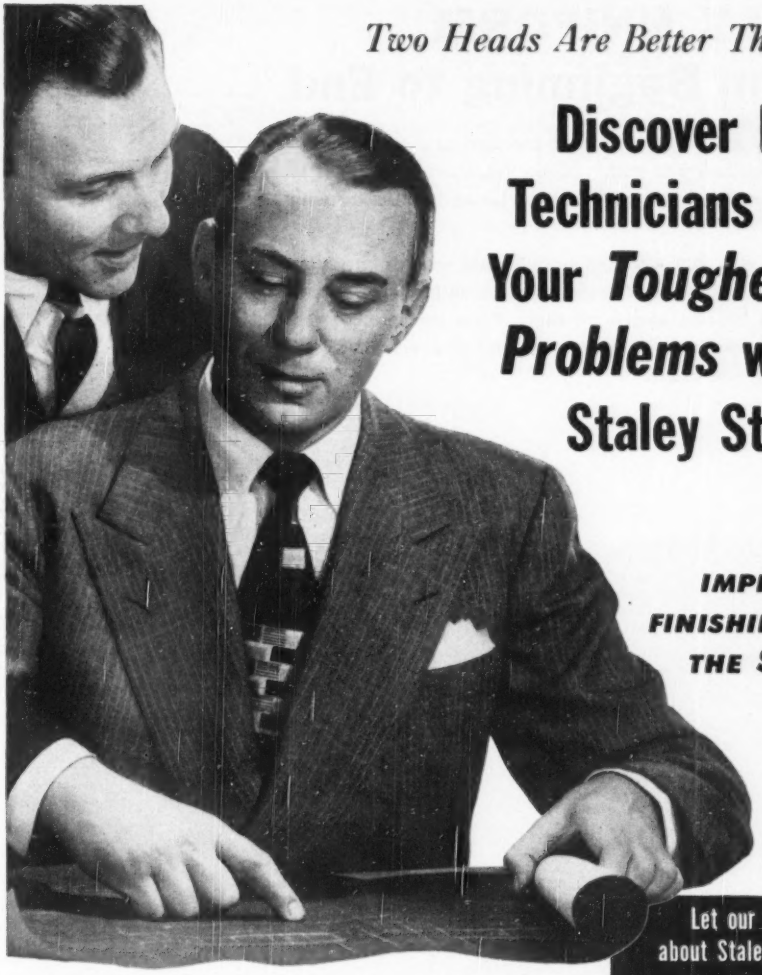
HOME OFFICE: Jackson, Michigan

EASTERN REPRESENTATIVE
J. Paul Laird
Philadelphia, Penn.

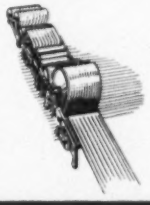
SOUTHERN REPRESENTATIVE
R. E. L. Holt Jr. & Assoc.
Greensboro, N. C.

Two Heads Are Better Than One!

Discover How Our Technicians Can Solve Your *Toughest Textile Problems* with Better Staley Starches!



IMPROVE SIZING, FINISHING, WEAVABILITY THE *Staley* WAY!



Why struggle with your sizing problems or starch needs by yourself? There's a Staley Technician ready at all times to work side by side with you and come up with the answer . . . help show you the way to better textile operations. HIS HELP COSTS YOU NOTHING! He's backed up by the more than 30 years' experience Staley has had in providing the ideal starch for all requirements . . . in developing laboratory and production line controls that assure uniform results and dependable performance with every shipment. Get all the facts today!

Let our experts advise you about Staley's superior quality—

PEARL STARCH

ECLIPSE®

A, B, C, D, E, F, G, H, I, J,

STA-GEL®

for Sizing Spun Rayon

A. E. Staley Mfg. Co., Dept. TI-7
Decatur, Ill.

Gentlemen:
Tell me all about the *plus* technical help I get with Staley Starches, and the way your products guarantee finer results.

Name _____ *Title* _____

Company _____

Address _____

City _____ *State* _____

Staley Starches

A. E. STALEY MFG. CO., DECATUR, ILL.

Dependable Service From These Points:

Atlanta, Ga.
Boston, Mass.
Chicago, Ill.
Columbus, Ga.
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Decatur, Ill.
Durham, N. C.
Greenville, S. C.
New York, N. Y.
Philadelphia, Pa.
San Francisco, Cal.
Spartanburg, S. C.

ABSOLUTELY UNIFORM... from Beginning to End

Have you ever thought of the problem of making a piece of card clothing that is absolutely uniform from beginning to end? To do this, literally *millions* of pieces of card wire must be cut, formed and inserted in the foundation with unvarying accuracy.

Formerly, the difficulty was that machine parts would wear, and unless these parts were frequently changed there would be some variation of shape. But the patented Tufferizing Process ended all that. Now you can get an absolutely uniform product from the beginning to the end of every fillet. For proof, specify TUFFER when you order.

HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.

Branches: Philadelphia, Pa. and Blanco, Texas *Direct Representation in Canada* A-5

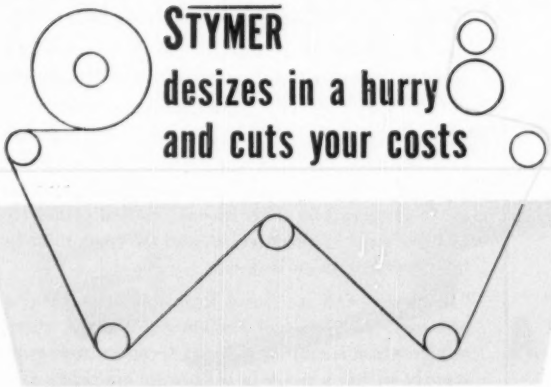
TUFFER CARD CLOTHING — ***IMPROVES PRODUCTION ALL ALONG THE LINE***

MONSANTO
CHEMICALS — PLASTICS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

TEXTILE CHEMICALS DEPARTMENT

serves you with a full-scale research and development program including chemicals for *all fibers, all fabrics.* Write Monsanto today about chemicals described below or for general information on chemicals of special use in your mill. Address: Textile Chemicals Department, Monsanto Chemical Company, Boston 49. Desk TIT 24.

STYMER desizes in a hurry and cuts your costs



There is no easier warp size to remove than Stymer. Stymer Size is easily rinsed in warm water with a detergent in jigs, becks, and continuous washers. Stymer cuts desizing costs and leaves the goods well prepared for subsequent dyeing and finishing operations. Stymer *itself* has some detergent action. It helps produce clean goods, and results in clearer, brighter, more uniform dyeing.

more Stymer advantages

Stymer size is easily mixed, can be stored for long periods and doesn't gel when cold to clog pipe lines or valves. Build-up on dry cans is held to a minimum, and difficulties with static are reduced or eliminated. The warp is smooth and splits easily at the lease rods. In the weave room, there's a minimum of shedding; no accumulation at the drop wires, heddles or reeds; the warp weaves well and efficiently.

desize STYMER BEFORE any acid treatment

Stymer-sized goods should not be subjected to acid treatment until the size has been removed, as Stymer becomes insoluble when acidified and the cloth requires more vigorous mechanical action than normal to effect complete removal. Enzymes have no value in the removal of Stymer, and are unnecessary.

MERLON S

for spun rayon suitings and dress goods

Merlon S is a leading candidate for the lowest-cost synthetic resin dispersion available for textile finishing. But, more valuable than low price is Merlon's performance.

Because Merlon S does not form a film, up to 15% of the weight of the goods can be applied to spun rayons. The body and fullness of the fabric increases without undue stiffening. At the same time, a dry and lofty hand is produced.

Merlon S is one of a series of fast-selling textile resin dispersions which produce a wide variety of finishes and effects on cotton sheeting, curtains, woolen fabrics, ticking, ironing board and mattress covers, cotton denims, cotton print cloth, as well as rayon dress goods. In each case, the durability, the fullness and body, and the desired sheen is produced.

Mills find the Merlons easy to apply, as these finishes require padding and drying only. Curing and rewashing are not necessary. As replacements for starch, the Merlons have the added quality of durability.

	Type	% Solids	Film Characteristics
Merlon S	Polystyrene	40	non-filming forming (low cost)
Merlon SP	Plasticized Polystyrene	40	continuous soft film
Merlon BR	Polyvinyl Butyral	50	clear, pliable, tough film
Merlon BRS	Plasticized Polyvinyl Butyral	50	somewhat softer than BR
Merlon KR-1	Polyvinyl Acetate	55	easily plasticized
Merlon KR-2	Polyvinyl Acetate	55	irreversible film, clear film properties
Merlon KR-3	Polyvinyl Acetate	35	extreme small particle size
Merlon KR-4	Polyvinyl Acetate	55	high polymer, large particle size
Merlon KR-5	Polyvinyl Acetate	55	medium polymer, medium particle size, vehicle for pigments
Merlon KR-6	Polyvinyl Acetate	55	high polymer, large particle, opaque film

Air Conditioning in Textile Mills*...

by **P. L. Davidson, Philadelphia, Pa.**
and **John deB. Shepard, Greenville, S. C.**
Consulting Engineers

Philip L. Davidson

John deB. Shepard

Question: Is a Central Station System more desirable than a Unit System?

Answer: "Both have obvious advantages. In a central station versus units, the cost of the base mechanical system is approximately equal. The former's cost exceeds that of the unit because it requires enclosure. This added cost, however, is offset by inherent easier maintenance and improved operating efficiency. Units, generally, should be limited to a capacity of 12,000 cfm. Central stations are often not practical beyond one floor of multistory mills, or to exceed 150,000 cfm."

Question: Does refrigeration have a place in textile mills?

Answer: "Definitely. Recent refrigeration installations give quick opportunity to spot effects of constant temperature in improved machine operation and handling of fibres. Current experiences with central systems reveal: (1) In a weave room operating on rayon fabrics with a modern central station humidifying system, the loom stops ranged from 2.3 to 5.4 per producing loom hour. The loom efficiencies averaged 92.6%, the seconds ranged between 15 and 16%. *When refrigeration was added*, the loom stops over a period of two months dropped to a range of 1.2 to 2.9. The efficiencies rose to 96%; the seconds dropped to a range between 4 and 7%.

(2) "A cotton spinning mill, after the installation of refrigeration, increased its spindle speeds 5% and its work load 14% with no increase in ends down.

(3) "A weave room running on combed broadcloth showed, after installation of refrigeration, an increase in production of 4½ to 5%.

(4) "A New England mill reported a 25% increase in production in a spinning room after the installation of a central station air conditioning system with refrigeration. This was attributed primarily to a decrease in absenteeism and only secondarily to a decrease in ends down.

"Records such as these highlight the results obtained with central station equipment where refrigeration is employed to fix temperatures constantly within a range of maximum efficiency and reasonable employee comfort. Advantages are frequently realized at an investment no greater than that required with straight or 100 per cent air systems.

"*This experience, proven in the textile field, should be significant in setting the pattern for all industrial air conditioning.*"

• •

YORK SALES POLICY

York believes, wherever possible, in channeling contract work through Architects, Engineers and Contractors. You are therefore assured of unequaled cooperation between your designer and York toward providing you with the finest air conditioning systems. York Corporation, York, Pa.

York's complete line of refrigerating and air conditioning products is the result of 65 years of resultful research and encompass:

1. a complete line of equipment
2. competitive prices
3. accurate, dependable product ratings
4. technical assistance based on "case histories"
5. cooperation with architects, engineers and contractors
6. practical help from York-trained engineers
7. a national organization
8. continuous product research and development
9. certified maintenance

York refrigeration air conditioning

The big advances come from

YORK

Headquarters for – **Refrigeration and Air Conditioning**

This advertisement condensed from an article authored by these consulting engineers, and published in* **Refrigerating Engineering, *February, 1950*

* *Manufactured by MACHINECRAFT, INC. Whitman, Mass.*

A NEW COST-CUTTING COMBINATION

Over a period of four years these ball bearing top rolls have been thoroughly tested in leading textile mills. Whitin has now adopted them as standard for cotton roving and spinning, wool and worsted spinning and American System equipment, when anti-friction rolls are specified. These anti-friction rolls have sealed-in lubrication insuring many years of service free from lubrication problems.

FEATURES:

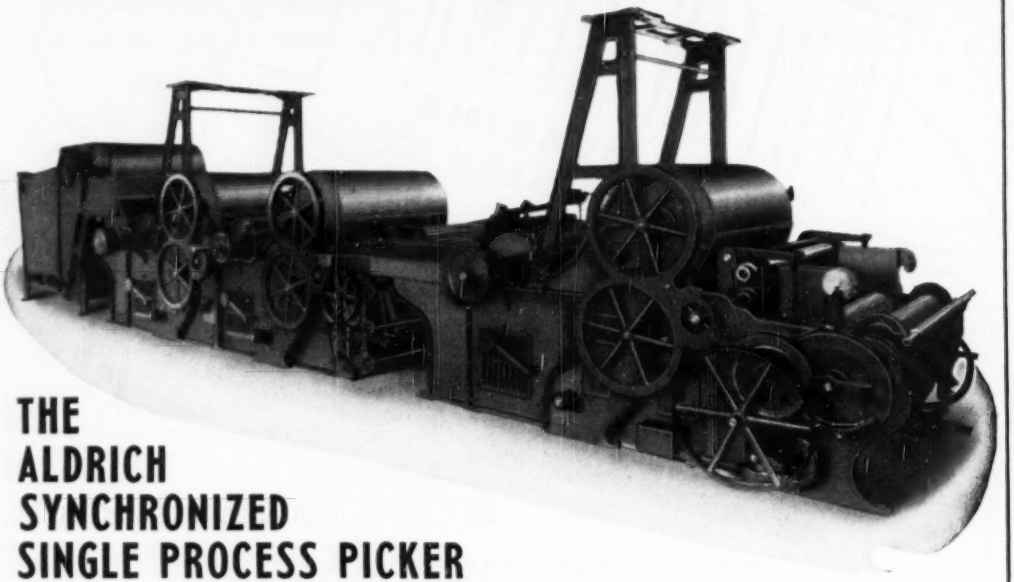
1. Reduction in piling costs
2. Elimination of ends down when starting machine
3. No oil drip or stains on cots
4. No oil stained fibers
5. Perfect rotating synchronization of top and bottom rolls
6. Improved yarn quality
7. Improvement of fiber control in drafting zone
8. Reduction in roll picking
9. Eliminates lapping of lint on journals
10. Less machine down time
11. Elimination of wear on cap bars and saddles
12. Precision manufacture permits easy interchange of parts
13. Available with standard coverings, as specified

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

FOR MAKING EVENER CARD SLIVER



THE ALDRICH SYNCHRONIZED SINGLE PROCESS PICKER

A true single-process picker, in which the finisher section is fed with a smooth, well-formed lap from the breaker section, instead of with loose cotton from a gauge box or hopper feeder. The Aldrich Synchronizer controls the feed from the breaker section to deliver the lap exactly as required by the finisher.

This makes a lap which is not only quite even yard by yard, but unusually even in every direction throughout the lap. Such a lap will make a very even card sliver.

The feeder on the Aldrich picker is equipped throughout with permanently lubricated ball bearings, which never require attention.

The Aldrich picker has all possible parts in the evener mounted on ball bearings for extreme sensitivity.

The Aldrich picker is equipped with a new and improved, completely silent, sideshaft drive to the evener.

AldricH MachinE

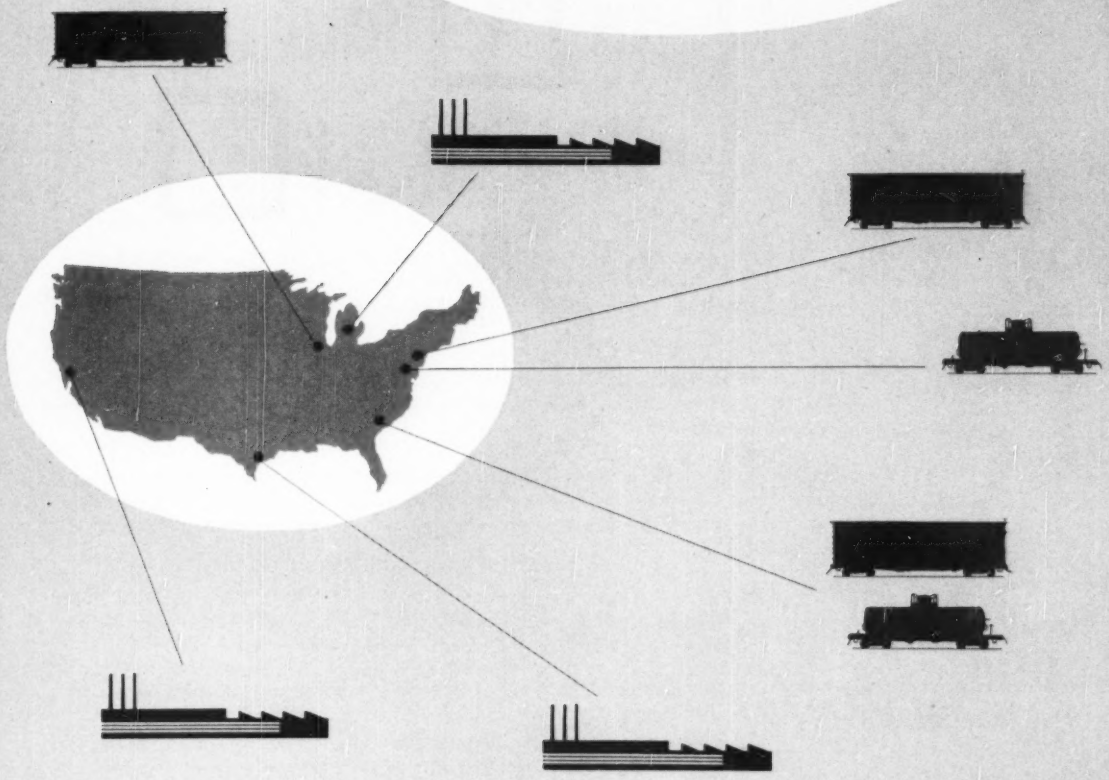
Greenwood WorkS South Carolina

Dow Caustic Soda

serves industry

. . . with unequalled distributing facilities

1. Three producing plants—in Michigan, Texas and California.
2. Caustic Soda Solution bulk tank terminal distributing facilities—Carteret, N. J. and Charleston, S. C.
3. Caustic Soda Solid, Flake and Ground Flake terminal distributing facilities—Chicago, Ill., Charleston, S. C., and Port Newark, N. J.



THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Atlanta • Cleveland • Detroit • Chicago
St. Louis • Houston • San Francisco • Los Angeles • Seattle
Dow Chemical of Canada, Limited, Toronto, Canada

DOW
CHEMICALS
INDISPENSABLE TO INDUSTRY
AND AGRICULTURE

Mr. Superintendent! Read this important message —

Jarrett's TRADE MARK

META-CLEAN

cleans equipment in 1 hour instead of 7

This is a fact—not guesswork! Tests in mill after mill* prove that Jarrett's META-CLEAN *reduces cleaning time seven times.* Machinery that once took *seven* hours to clean now takes *one* hour. That's an actual saving of $4.50 in labor and *six hours production time* on an individual job.

No change in present methods! Jarrett's META-CLEAN is completely versatile: spray it on, wipe it on, brush it on or immerse! Then wipe off or blow off with air pressure hose. *Cleans on the spot*—no waste of time moving machinery and equipment.

Does away with expensive steam cleaning! Expense and trouble of old steam cleaning are eliminated by Jarrett's META-CLEAN. All grease, lint, dirt and oil is removed without slightest harm to skin or equipment. Effective universally on all textile machinery throughout the industry.

Economical beyond belief! One part Jarrett's META-CLEAN to *twenty* parts water is effective. This new, different solution is non-inflammable, odorless and non-irritating. Its exclusive formula contains no harmful alkali, acid or petroleum base.

● ***Write!***

* *Write* for actual names of mills using Jarrett's META-CLEAN for all equipment cleaning.

Write for an actual demonstration of Jarrett's META-CLEAN in action in your own plant, or send us your purchase order at once for this guaranteed and proven product. Jarrett's META-CLEAN is shipped in full, half, and quarter non-returnable steel drums.

SATISFACTION *GIVEN* . . . NOT PROMISED

SALES REPRESENTATIVES WANTED

CECIL H. JARRETT COMPANY, INC.

Manufacturer & Distributor of Chemicals & Supplies, Newton, N. C.

first impressions are important

Make your textiles sell on sight

with *National Aniline Dyes*

NATIONAL ANILINE DIVISION
ALLIED CHEMICAL AND DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y.

Boston Providence Philadelphia Chicago San Francisco
Portland, Ore. Greensboro Charlotte Richmond Atlanta
Columbus, Ga. New Orleans Chattanooga Toronto

THIS IS NO. 80 OF A SERIES ON

GETTING THE MOST FROM TWISTING

Information about twisting designed to show improvements in twisting equipment and new ideas in the twisting operation

ALIGNMENT OF FINGERS
Model 100 Uptwister

Good package formation on the Uptwister depends upon properly-aligned, free-running take-up bobbins which operate with a minimum of end play.

At the time of erection, the fingers on the Model 100 are properly aligned, but the constant donning and doffing may cause them to get out of alignment, impairing package formation.

Therefore it is advisable to check the alignment of fingers periodically.

Finger spacings can be checked with the gauge as shown in Fig. 1.

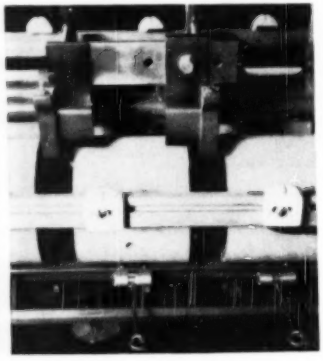


Fig. 1. Gauge checks finger spacing and centering of take-up roll.

REDESIGN OF FINGERS
Model 100 Uptwister

The fingers on the Model 100 Uptwister have been redesigned to provide more accurate positioning of the take-up bobbin by means of a milled slot. A flange at the rear of this slot extends up at an angle beyond the top of the finger. When the take-up bobbin is being donned, this flange guides it into the slot and prevents it from being placed too far back on the fingers which might cause the bobbin flanges to become nicked.

Fig. 2. Redesigned fingers for Model 100, showing milled slot.

CARE OF TAKE-UP ROLLS
Model 100 Uptwister

Take-up rolls should be inspected periodically to make sure that they are centered in relation to the take-up bobbin and also that the cork covering is clean and in good condition.

The gauge used for checking the finger spacings can also be used to center the take-up roll. As shown in Fig. 1, the two arms on the gauge are cut away so that the take-up roll can be centered between them. Take-up rolls are attached to the shaft by means of a set screw. A hole through the cork covering and the take-up roll permits a small wrench or screwdriver to be inserted in order to loosen the set screw.

The cork covering should be cleaned periodically with a solvent such as carbon tetrachloride, and take-up rolls on which the cork covering is worn or mutilated should be re-corked.

When a new covering is placed on the take-up roll, there should not be any rough or high places at the seam. Moreover, the circumference of the cork covering should be concentric with the bore of the take-up roll, and the covered roll should be cylindrical in shape.

Some installations are equipped with cast-iron take-up rolls which are slightly tapered. When covering is applied to these rolls, some of it is ground off to remove the taper. If these take-up rolls are covered on the frame, they will be conical in shape and consequently will produce a tapered package. Since, in order to meet the conditions stated above, a machining operation is necessary, it is not practical to attempt covering the take-up rolls on the frame.

At the Atwood Division, when take-up rolls are sent in to be recovered, the following procedure is used —

1. Remove old covering.
2. Wash roll to remove any particles of the cork covering and adhesive which might still adhere to the metal take-up roll.
3. Apply new covering, using a specially-prepared adhesive.
4. Wind tape band tightly around the covered roll.
5. Dry the rolls in oven under conditions which favor even drying without cracking.
6. Grind off the ends of the covering to remove any rough edges.
7. Grind the face of the roll to within .010 in. tolerance.

Reg. U.S. Pat. Off.
23.9.5

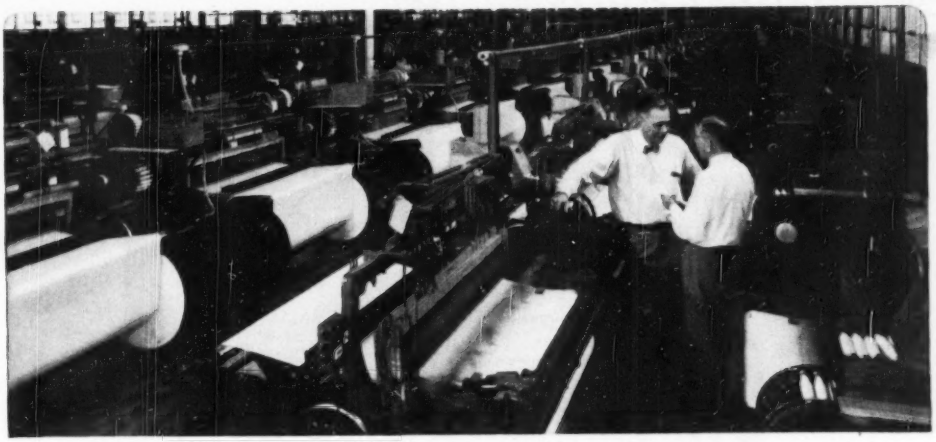
May, 1950

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

UNIVERSAL WINDING COMPANY

Atwood Division

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA CHICAGO LOS ANGELES MONTREAL and HAMILTON



Years of smooth-running production ahead

for these new **looms**

with the help of

Gulf Lubrication

The kind of lubrication these new looms get down through the years will play an important part in determining the quality of the cloth they produce, how long they retain their efficiency, and how much they cost to operate.

To insure proper lubrication, the management of this progressive mill adopted the quality lubricants and the methods of application recommended by a Gulf Lubrication Engineer. As a result, every bearing and gear gets better protection against wear and loss of accuracy. And that means higher quality cloth in the long run, plus lower maintenance costs.

Scores of the country's leading mills rely on Gulf Lubrication, report that it helps them keep their machines and equipment in better condition and helps them reduce costs. They know from experience that Gulf lubricants are high quality, uniform products—that each one does its job well. They have found the wide experience and broad practical knowledge of Gulf Lubrication Engineers invaluable—a source of real down-to-earth solutions for their maintenance and lubrication problems.

This kind of lubrication service has real dollar and cents value to you. Write, wire, or phone your nearest Gulf office today and ask a Gulf Lubrication Engineer to call.

Gulf Oil Corporation · Gulf Refining Company

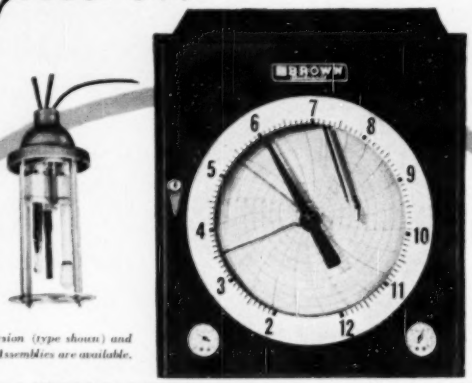
GULF BUILDING, PITTSBURGH, PA.

Sales Offices - Warehouses

Located in principal cities and towns throughout Gulf's marketing territory

GULF INDUSTRIAL LUBRICATION

Set Your Sights on



Immersion (type shown) and Flow Assemblies are available.

PROCESS IMPROVEMENT...

MORE ECONOMICAL USE OF CHEMICALS...

LONGER EQUIPMENT LIFE...

WITH...

THE *ElectroniK* pH CONTROLLER

With efficient operation as a moving target, many operators throughout industry are loading their guns with extra ammunition . . . by providing control for every important variable. In such cases, automatic pH control is gaining recognition as a cost reduction factor . . . and justly so! Proper control of pH can have startling results. It is vital to the stabilization of process variations, to the chemical treatment of raw and waste water, and to the useful life of production equipment.

No matter what your application, the *ElectroniK* pH Controller will prove its value in a very short time . . . through unusual sensitivity to prevailing conditions, accurate and permanent record, rapid response and automatic control action.

Call in your local Honeywell engineer for a discussion of your particular pH requirements . . . he is as near as your phone.

BROWN SPECIALIZED INSTRUMENTATION FOR THE TEXTILE INDUSTRY IS SETTING NEW STANDARDS FOR HIGH-QUALITY, LOW-COST PRODUCTION!

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4492 Wayne Ave., Philadelphia 44, Pa. Offices in more than 80 principal cities of the United States, Canada and throughout the world.

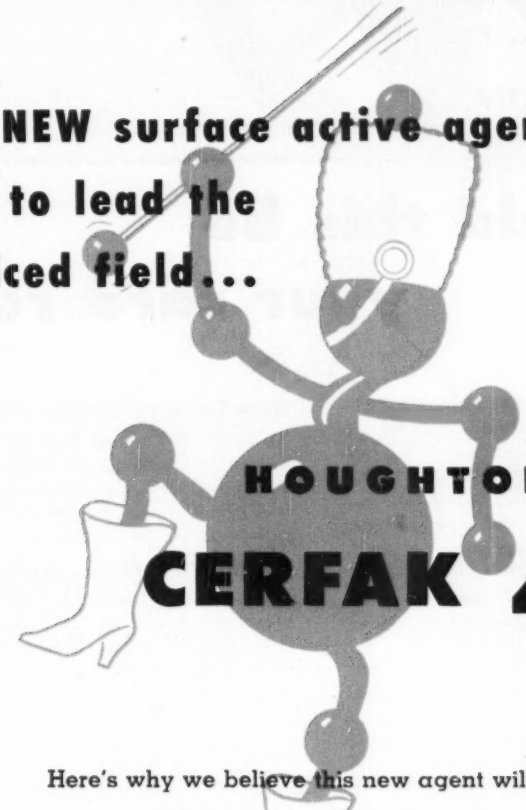
Write, today, for a copy of Catalog 15-12.

FOR THE TEXTILE INDUSTRY

MINNEAPOLIS **Honeywell**

BROWN INSTRUMENTS

Here's a NEW surface active agent that is destined to lead the lower-priced field...



HOUGHTON'S CERFAK 453

Here's why we believe this new agent will appeal:

It's an anionic wetting agent, with good detergent ability.
It's non-staining.
It works well over a wide pH range.
It can be used in bleaching operations.
It does not affect enzymes used in desizing.
It is also a good re-wetting agent and dye bath leveler.
And . . . it costs surprisingly little!

Cerfak 453 is Houghton's answer to the request for a lower-price-per-pound surface active agent. It is *not* a cut-back of more concentrated products in the Houghton line of wetting or re-wetting agents and detergents. It is adaptable to a wide range of uses. Name your need, and we'll tell you how Cerfak 453 will fill it. For technical folder, write or phone—

E. F. HOUGHTON & CO.
303 W. LEHIGH AVE., PHILA. 33, PA.
Makers of textile processing oils and chemicals, lubricants and textile leathers, since 1865.

YOU CAN BE **SURE**.. IF IT'S

Westinghouse

could this be your card room?

Does your card room still look like this? If so, consider the benefits of modernizing. With a Westinghouse individual drive on each card you do away with line-shaft drives and all their costly problems. There's no more shaft bearing maintenance, no messy lubrication. No long belts to stir up lint, increase static, endanger workers. You eliminate power waste in belt slippage, bearing friction. The whole line isn't down when one card needs service. Cards start easier, speed is more uniform, over-all productivity goes up.

Your Choice of Three Drives

Three *service-proved* Westinghouse card drives make these improvements possible. Each drive has advantages to meet your particular needs. Each consists of the Westinghouse card controller, designed specifically for card service, and one of three types of Westinghouse card motors. Two of these motors drive through chain or belt speed reducers while the third type, the Westinghouse gearmotor, combines motor and speed reducer in one factory co-ordinated unit!

High Starting Torque

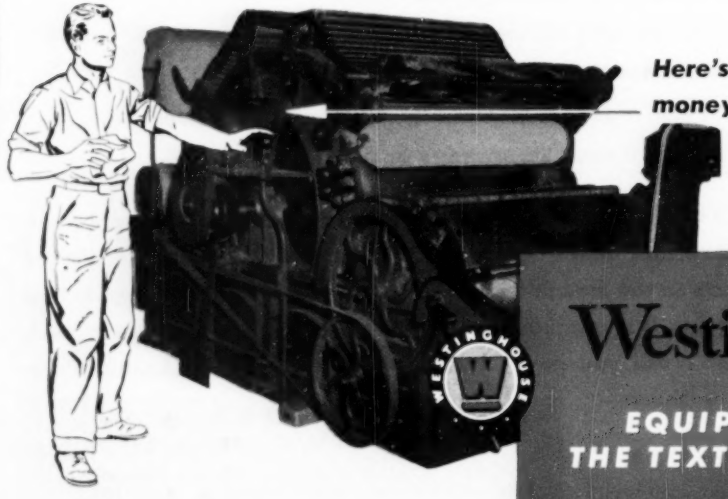
All three card motors have the high starting torque needed to overcome the card inertia and bring it swiftly and smoothly to running speed. These motors have pre-lubricated, factory-sealed bearings. *They need no lubrication and injurious dirt can't get in.*

Special Card Motor Controller

The controller is specially built for card service. To prevent accidental card reversal, the reversing switch is *inside* the controller—and the controller door *cannot be opened* while the card is operating. The enclosure is the NEMA IA gasketed-type to keep lint from the mechanism. Moreover, this enclosure is bonderized for high rust resistance, an exclusive Westinghouse feature.

Check over operating and maintenance costs in your card room. Then call your Westinghouse office for more information on Westinghouse Card Drives or write for folder B-4596. You'll find you can make *major savings* in your operation. Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Penna.

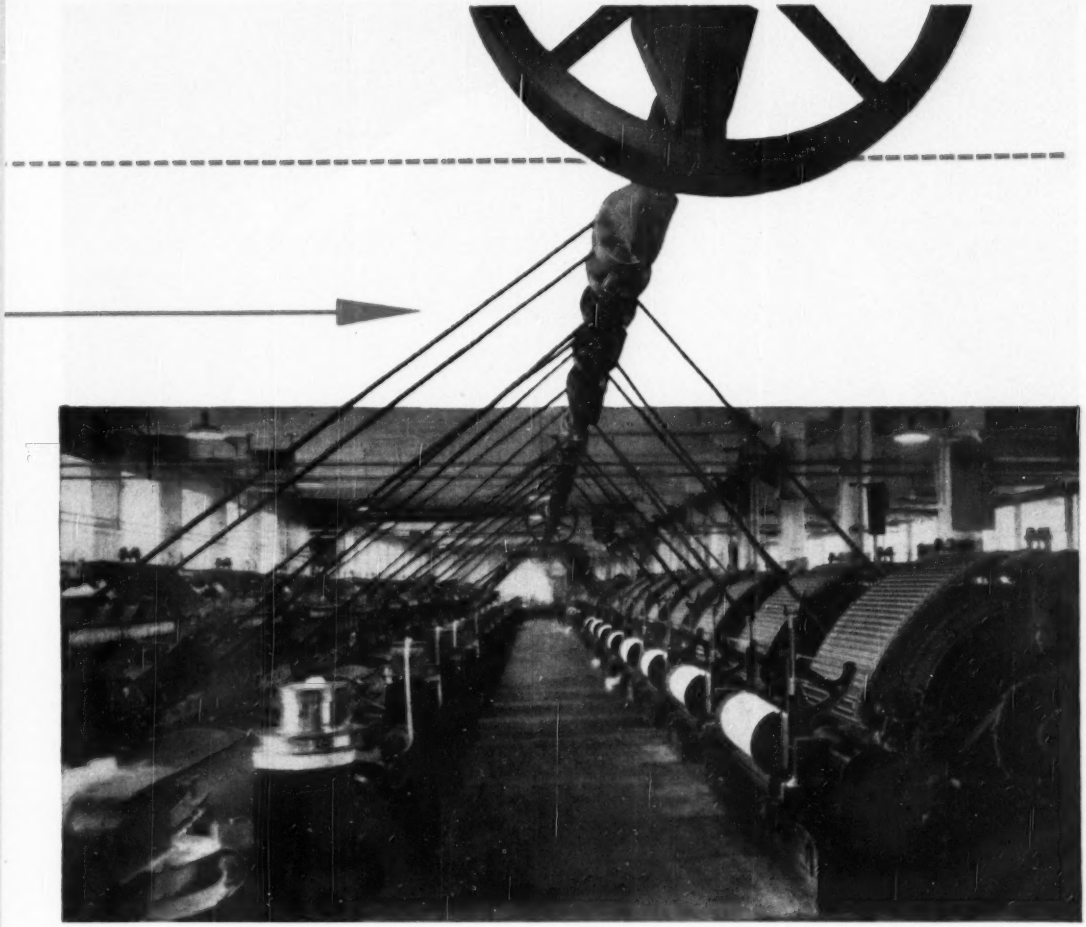
J-94841



Here's the modern money-saving way!

Westinghouse

EQUIPMENT FOR THE TEXTILE INDUSTRY

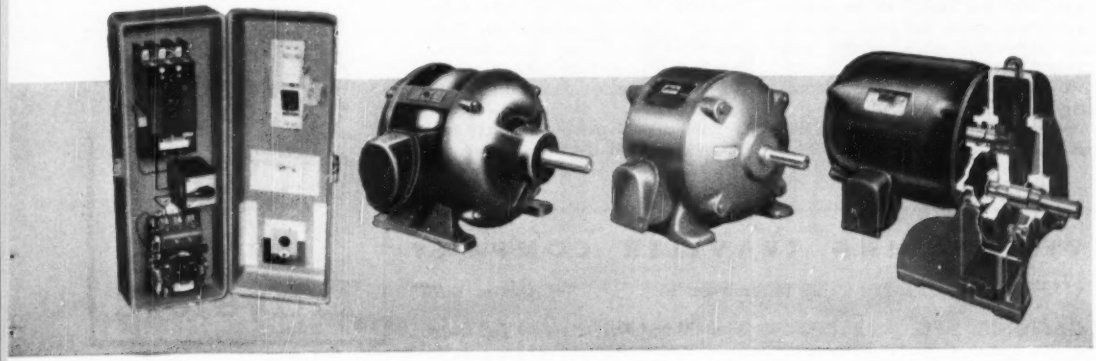


Special Card Controller —with tamper-proof reversing switch, built-in circuit breaker, "De-ion" arc quenchers, Bonderized enclosure.

Lint-Free Motor Drive —making fine production records in many mills. An air blast through the motor keeps it *really* free of lint.

Totally-Enclosed Motor —*two inches shorter* than conventional motors to give you extra aisle space. And lint can't even get in!

Westinghouse Gearmotor —the *ultimate* in card drives. Motor and speed reducer *in one unit*. No belt maintenance, less upkeep all around.



'Round the World 1113 times for $1.00

Calculations based on performance records of Victor 4/0 F1.1 X3D Travelers show that one dollar's worth ran about 27,840,000 miles — 1113 times the distance around the equator.

When you see performance like that, it's easy to think that traveler costs are too small to be worth bothering about. But such records are achieved only when you choose the right traveler for the job, and get the best that money can buy.

Selecting travelers carelessly, without proper regard for quality, will quickly cut down the "mileage". Also, excessive ends down, plus frequent traveler changes, can boost your traveler-pound cost in yarn production far out of line.

When you choose Victor Travelers, a Victor Service Engineer will help you make sure to get the traveler best suited to your individual spinning or twisting. You also get extra long traveler-life, because Victor Travelers take top honors in any test for quality and uniformity.

Remember, traveler costs per pound of yarn depend, *never* on price, *always* on performance. Plan now to talk to a Victor man, whether you are running conventional fibers, synthetics, or blends. Write, wire or phone the nearest Victor office . . . for prompt service.

•

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . . . 20 Mathewson St. . . . . Tel. Dexter 1-0737

GASTONIA, N. C. . . . . 358-364 West Main Ave. . . . . Tel. 5-0891

—pick the winning gabardines

Here are some of the reasons why makers of quality gabardines specify a high TECA content:

TECA improves the "hand"

TECA is naturally wrinkle resistant

TECA is exceptionally soil resistant

TECA helps hold a press

TECA is shrinkage resistant

TECA is inherently launderable and fast drying

Consumers who have worn the famous Teca Blend sports shirts will welcome the performance-insurance of Teca fiber in gabardine shirts, slacks and outerwear.

Put your gabardines out in front—pick the fiber with a consumer following. For information about Teca, consult A. M. Tenney Associates, Inc., 10 East 40th Street, New York, sales representatives for TENNESSEE EASTMAN CORPORATION.

woven with TECA* fiber

* *TECA is an Eastman trade-mark. It identifies a short, crimped fiber made by Eastman from cellulose acetate — a fiber otherwise known as estron or acetate rayon staple. There is only one TECA fiber.*

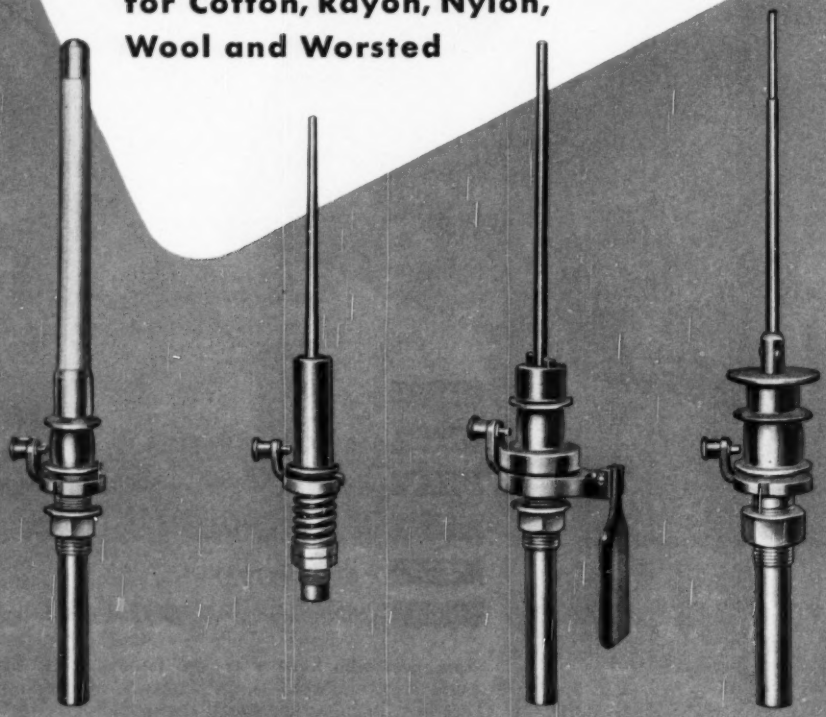
TENNESSEE EASTMAN CORPORATION (Subsidiary of Eastman Kodak Company) **KINGSPORT, TENNESSEE**

Marquette

ROLLER BEARING SPINDLES

with ***FULL-FLOATING FOOTSTEP BEARING***

for Cotton, Rayon, Nylon, Wool and Worsted



Modernize your old frames with Marquette Roller Bearing Spindles, or specify them on new frames. They save power, save tapes, save lubricant, and require less maintenance. They increase production through higher speeds, fewer ends down, and larger packages. Result: MORE YARN AT LOWER COST.

We'll be glad to prove the advantages of Marquette Roller Bearing Spindles in your mill. Contact our home office or one of our representatives for a test installation.

PROTECTED BY U. S. AND FOREIGN PATENTS, AND PATENTS PENDING

The **Marquette METAL PRODUCTS CO.**

CLEVELAND 10, OHIO

SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSES
FUEL OIL INJECTORS • PRECISION PARTS AND ASSEMBLIES

BYRD MILLER, WOODSIDE BLDG., GREENVILLE, S. C. • C. H. WHITE, 1229 PAMLICO DRIVE, GREENSBORO, N. C.
WILLIAM P. RUSSELL, BOX 778, ATLANTA, GA. • JOHN J. HALLISSY, 58 LIVINGSTON AVE., LOWELL, MASS.

Trends Indicated in Industry Area Survey

Textile Industries
Vol. 114 • July 1950

Mill Doctors

TWENTY-ONE per cent of the organizations in the textile industry which were studied in a total-area sample survey by the editors of TEXTILE INDUSTRIES have "mill doctors." These organizations with doctors represent 26% of the mills studied, 45% of the employees, and 44% of the spindles.

The term "mill doctor" was understood by the editors and those participating in the survey to mean a working arrangement with a doctor, one who had his office at or near the mill and who devoted a part of his practice to the mill's employees through a contract with the mill. The arrangement does not preclude the doctor receiving in-town calls or having non-mill persons to visit his office.

In addition to the 21% having mill doctors, another 11% of the organizations and 6% of mills, employees, and spindles have a doctor on call. Thus, 32% of both organizations and mills either have doctors at the plant or have a working arrangement with specific doctors. These represent 51% of the employees and 50% of the spindles in the sample.

Those having no full time doctor or working arrangement with a doctor amount to 68% of the organizations and mills, having 50% of the spindles and 49% of the employees, of those surveyed.

Scope of Practice. Almost without exception, where there is a mill doctor, he visits the plant regularly, even though his office is not on mill property.

The survey further showed that the mill doctor or the doctor on call does not, as a rule, give periodic examinations; however, in some instances an annual physical examination is available at the option of the employee.

In a few instances the mill doctor does visit the family of the employee at the employee's home, at company expense; some other plants arrange for the doctor to visit the homes of the employees at a reduced cost.

One organization has a cooperative plan whereby the employee contributes weekly to a fund which in turn pays for medical aid during illness.—J.C.F.

HOW SURVEY WAS CONDUCTED

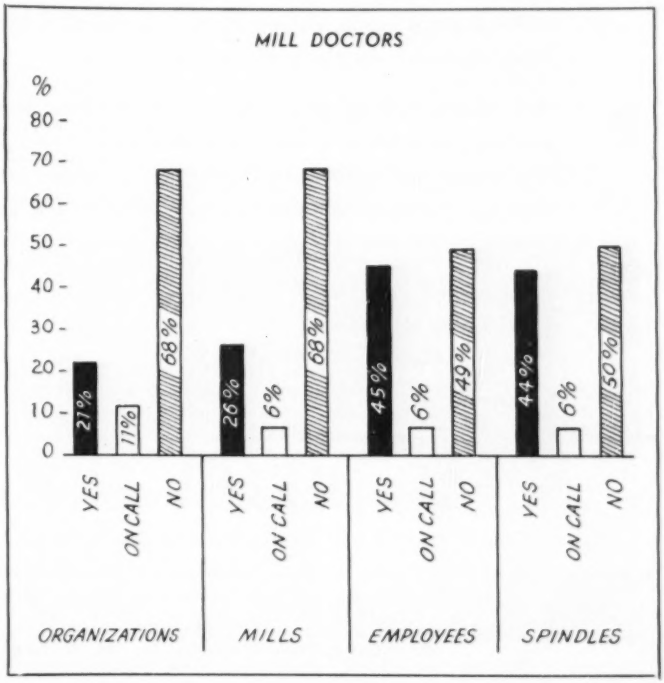
THE SURVEY was conducted in several southern states on personal visits to the mills by the editors of TEXTILE INDUSTRIES. The total-area sample method was used, whereby all of the mills within a chosen radius were polled. Enough areas were used to give a good sample. Knitting and woolen mills were not included.

To check sampling procedure, the sample of one state was enlarged to include approximately sixty per cent of the spindles. As a further check on the reliability of the sample, questions were injected into the questionnaire on which previously compiled industry figures are available.

Although any method of statistical selection may be criticized, the editors believe that the sample is large enough to indicate a trend in the areas covered.

Even though the double checks made from known figures prove the reliability of the survey, readers are cautioned against an attempt at projecting the percentages for application to other areas or other branches of the industry.

Note: An "organization" may be composed of only one plant, or an organization may represent several plants. The term "mill" indicates a single unit. Thus, where an organization answers, one or more mills may be included in the total. Few industry statistics are based on organizations; most statistics apply to mills, spindles, or employees.



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NEWS in BRIEF

Textron Workloads Equal. Royal Little of Textron, Inc., reported to stockholders that workloads of the company's northern units and southern units are on an equal basis. New equipment has been installed in northern rayon plants and the union has been cooperative, he said.

Vicara-Nylon Hosiery Yarn. Pacific Mills has developed a 75-25% Vicara-nylon blend yarn for hosiery purposes. It is being tested in the hosiery mills.

Japanese Goods in South Africa. Textiles from Japan continue to reach South Africa. Low prices and available stocks are primary factors in the purchases.

Educational History of Textiles. "Textiles on the March" is the title of an educational history being sponsored by a number of textile trade association executives on behalf of the Textile Research Institute.

Pillow Cases for Rubber Pillows. Recognizing the popularity of the new foam rubber pillows, Cannon Mills has delivered specially sized pillow cases to fit them.

ECA's Hoffman on Imports. The problem of unemployment in the textile industry cannot be solved by cutting off textile imports, ECA Administrator Paul G. Hoffman told TWUA. He advised that mass production methods must be exploited to the fullest so as to produce goods at prices that people can afford to pay. "Expansion of domestic consumption in this way," he said, "is a better answer to the unemployment problem than the reduction of imports."

V-Belts Protected Against Mildew. A special mildew inhibiting agent is now used in the manufacture of V-belts made by Goodyear.

CIO Attacks Socialistic Trend. In a resolution adopted by Utilities Workers Union of America (CIO), the current trend to socialism was attacked; in part the resolution read: "The government is already in the utility business to quite an extent and unless we are on our guard will soon own most of it. This will be the first step down the socialistic highway. Then transportation, communications, steel, and the rest will follow to put an end to our American way of life."

Berkshire Knitting Largest Advertiser. The Berkshire Knitting Mills was the leading hosiery advertiser in national consumer magazines last year, in terms of space costs.

Alcohol Process for Wool Scouring. Dr. Harold P. Lundgren of the Western Regional Research Laboratory, Albany, Calif., reported that a new alcohol process for wool scouring offers promise of commercial application to large batch scouring of wool. The studies of the process are being performed at the Western Lab.

Great Britain's Knitting Men Visit U. S. Representatives of Great Britain's hosiery and knitwear industry have visited this country under the Marshall Plan program to study American production know-how.

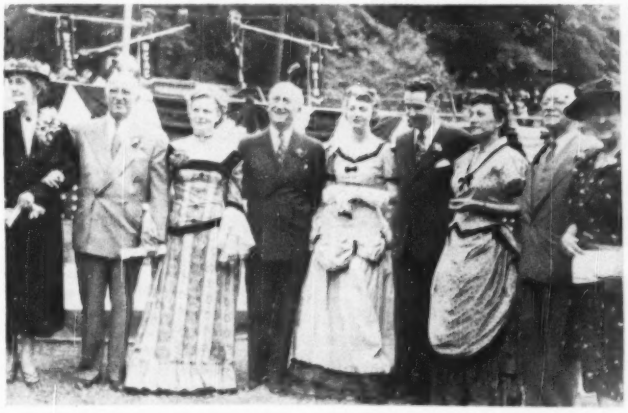
Universal Cotton Standards. Following the Universal Cotton Standards International Conference, possibility was seen that in 1953 universal cotton standards will be established for spotted and gray cotton. Other proposals: Eliminate the standard for Middling Fair and discontinue Strict Good Middling as a physical stand-

GOLDEN ANNIVERSARY CELEBRATION AT ORR MILLS

May 24 was a big day at Orr Mills in Anderson, S. C.—it was the 50th anniversary of the founding of the plant, and more than 8,000 visitors came to participate in the Golden Jubilee celebration.

Plant tours, a band concert, words of praise from distinguished speakers including the former Secretary of State James F. Byrnes, and presentation of awards to veteran employees were highlights of the day's activities.

Left to right: **Mrs. John A. Lyons**; **A. O. Joslin**, president of Orr Mills; **Mrs. LeRoy Gunnells**, **Mr. Byrnes**, **Miss Mickey Ledford**, **Joe J. Lyons**, executive vice-president of Orr Mills; **Mrs. Fred Jones**; **John A. Lyons**, vice-president of Orr Mills; and **Mrs. Byrnes**. Mrs. Gunnells, Miss Ledford and Mrs. Jones were hostesses and wore gowns fashioned in the 1900 style.



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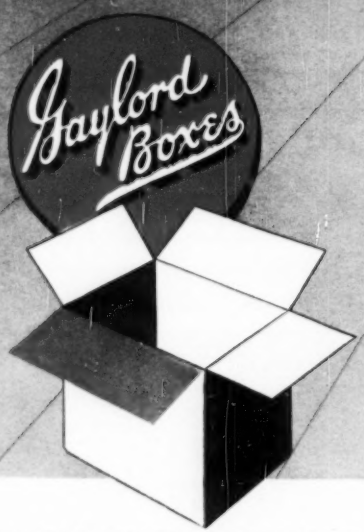

Yes, there are few manufactured products today that can't be packed for shipment in a Gaylord Box. The ingenuity of Gaylord's Engineering and Research Department, together with its broad experience, assures a sound, sensible solution to most packaging problems.

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Milwaukee • Chattanooga • Weslaco • New Haven • Appleton • Hickory • Greensboro
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ard and make it descriptive; exclude cotton from irrigated bales in any set of standards representing American Upland cotton and establish separate physical standards for several classifications of irrigated cotton.

U. S. A. to Depend on Foreign Wool. Because of lower domestic production and increased consumption, this country is producing a smaller share of the wool it uses, according to USDA. As a result, U. S. wool during the next few years will give domestic manufacturers less protection from fluctuations in world supply and price than it has provided during the past two decades.

Stops Mildew. Laboratory tests by Monsanto have confirmed earlier indications that mildew or mold growth can be stopped by proper use of paradichlorobenzene. It is expected that the product will find year-around use in highly humid and warm areas.

Cotton Insect Damage 1949. In dollars and cents the 1949 cotton insect damage was the highest in history. Boll weevil in 1949 reduced the full yield 17.5% in the 13 cotton producing states in the "weevil belt."

Estron Carpets. Woven of yarns spun of 100% Estron, new carpets by James Lees & Sons are available following years of research. The new carpets are said to have a pleasing feel, possess high resiliency, can be cleaned easily, and are moth resistant.

Publication on Trading with Italy and Greece. American business firms which desire to trade with Italy and Greece may secure informative publications from Economic Cooperation Administration, Washington, D. C. The literature includes directories of Italian and Greek importers.

Hosiery Workers Union Looks Southward. The American Federation of Hosiery Workers have set their main future objective as the unionization of full-fashioned mills in the South, where union shops are scarce, and where a major part of full-fashioned products are made.

DIELECTRIC OVENS SANITIZE FEED BAGS FOR REUSE

Eastern States Farmers Exchange became the first feed manufacturer to use high frequency heat for sanitizing burlap bags for reuse. The dielectric heating process is reported to have no apparent detrimental effect on the life or soundness of the bags.

Courtesy, General Electric Co.

Replacing Obsolete and Worn Machines. One weakness in replacement of machinery is that management fails to investigate sufficiently all possible alternatives, according to Duncan J. Stewart of Barber-Colman Company. Investigation requires more personnel continuously engaged in such activities. Providing such personnel for replacement analysis pays off in handsome profits which will lead to better working conditions, he said.

Value of Human Relations Cited. "Where once we thought of employee relations, changing conditions have brought demands for public relations, expanded customer relations, our relations with those who serve us with materials and supplies, and our relations with our government . . . well for us to remember that regardless of ideal physical equipment and unlimited financial resources, unless we can have proper human relations we will lose our place in the sun."—N. Barnard Murphy, Riegel Textile Corp.

Anonymous "Shrink-Resistant" Markings Hazard to Wool. Pointing to a nation-wide survey indicating that 80% of typical consumer families have woolen shrinkage problems, Robert M. Dowling of Sanforized Division of Cluett Peabody warned that anonymous shrink-resistant markings are hazardous to the woolen industry. Mr. Dowling pointed out that eagerness to tap this ready market has brought forth a rash of shrink-resistant labels and similar markings which are accepted at their face value by consumers, but which unfortunately are not supported when the merchandise is washed. He urged adoption by manufacturers of "reasonable standards of shrinkage control."

Glass Ribbon in Condensers. Through the use of glass ribbon in the place of mica sheets in miniature condensers, the Signal Corps expects to achieve a saving of 50 to 70% in manpower during mass production.

1949 Government Research Work on Cotton. Funds expended for cotton research during 1949 amounted to $1,108,000, according to a Research and Marketing Administration report.

Textile Foundation Will Terminate. At least $750,000 have been appropriated to the Textile Research Institute, Inc., by the Tex-

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Heat-stabilized amylolytic enzyme preparation, liquid. Solubilizes starch sizing in cotton, rayons and mixed goods . . . at extremely high temperatures. *De-size faster at lower cost with Rapidase.*

RAPIDASE-M Intermediate strength—with all the characteristics, quality and value of Rapidase. For those who prefer a de-sizing agent of higher concentration.

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A powdered amylolytic enzyme preparation in high concentration. For those who prefer the convenience of a powdered enzyme . . . with all the advantages and economy of Rapidase.

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In conjunction with any enzyme preparation . . . SACON . . . a non-ionic wetting agent and detergent. It is compatible with enzymes and is applicable in neutral, acid or alkaline solutions.

Our technicians are available to visit your plant on request . . . Write for booklet.

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Board of directors of the Cotton Manufacturers Association of South Carolina

SOUTH CAROLINA COTTON MANUFACTURERS MEET

At a well attended meeting held in Charleston, S. C., on May 12-13, the Cotton Manufacturers Association of South Carolina elected C. B. Hayes (vice-president, Pacific Mills, Lyman, S. C.) president of the organization. W. H. Beattie (president, Woodside Mills, Greenville, S. C.) was elected vice-president. The board of directors reelected John Cauthen as executive secretary.

R. E. Henry (vice-president and treasurer, Dunean Mills, Greenville, S. C.), who is retiring in July after many years in the textile industry, was elected an honorary member of the association's board of directors.

A resolution adopted by the association at the meeting was one calling upon the State Department to recognize the dangers to this country's textile industry arising from foreign competition and requesting a protective tariff.

"Textile Industries" staff photos

Seen at the South Carolina meeting: top row, left to right, **W. J. Erwin** (Riegel); **J. Wilbert Wood** (Industrial); **Elliott W. Springs** (Springs); and **R. E. Henry** (Dunean).
Lower row: **John Cauthen** (association exec.-sec.); **J. M. Bailey** (Judson); and **A. Z. F. Wood** (Springs Bleachery).

tile Foundation for specified research investigations. The Foundation will be dissolved but its advisory committee will serve in a similar capacity for the Institute. The move was initiated in the interests of "economy, efficiency, and greater achievements," as stated in a unanimously adopted resolution of the directors of the Textile Foundation in Washington, D. C.

Loom Patents. George F. Mack of Anderson, S. C., has been issued Patent No. 2,483,587 on a device to be attached to a loom for making venetian blind tapes. Patent No. 2,482,975 issued to H. B. Gosnell of Slater, S. C., is for a means of holding tension on the filling yarn in a shuttle when weaving.

Suint Emulsified Wool Grease. The presence of small amounts of added alcohols improves the grease emulsifying power of suint. Minor adjustment in the concentration of alcohol makes it possible to recover the grease. First revealed at a Wool Bureau sponsored meeting by Department of Agriculture spokesmen, the new principle provides the basis for a continuous suint scouring of grease wool by which the grease can easily be recovered and both alcohol and suint can be reused. New applications and extractive methods for the various constituents of wool grease

HARTOFOL gives Extra wetting-out action

HARTOFOL Shows Nearly Twice the Wetting-Out Action Displayed by the Conventional Alkylated Aromatic Sulfonates

This *concentrated* alkylated aromatic sulfonate, available as a liquid gel, is stable to acids, alkalies and hard water. HARTOFOL contains very little salt — you pay for the active organic ingredients only!

In addition to its excellent wetting action, HARTOFOL shows good detergency (particularly in the presence of alkalies and phosphates) and good sudsing action. It is recommended for use in all textile processing where superior wetting-out, re-wetting and scouring action are required.

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Leveling Agents
Cationic Softeners
Cotton Warp Dressings
Wetting-Out Agents
Weighting Agents
Mercerizing Penetrants

Hart Products

based on research

may provide profitable markets. Cholesterol is the only grease by-product now being commercially recovered.

All-Nylon Satin Lingerie. A new light-weight satin, woven of multi-filament Du Pont nylon is being introduced in slips by Barbizon. The new satin is firm-bodied, has excellent drape, and is especially suitable under summer sheers since it is shadow-proof.

N. C. State Graduates Large Textile Class. A total of 248 individuals will receive their degrees on June 11, when North Carolina State College will graduate its 50th class of textile students. Except for the second decade of the school's history, each 10-year period has seen double the number of graduates of the previous decade. A high percentage of these graduates has gone into the textile industry for their life's career.

Wool Derivatives. Close to 100 chemical derivatives of wool have been prepared in the research laboratories of the U. S. Department of Agriculture. Several show significantly enhanced stability to hot water and reducing agents. Treatment of wool by propiolactone elasticizes the fiber and improves its felting properties. A government sponsored program is seeking to expand wool usage by nullifying wool's various limitations.

Fringe Benefits. An industrial report from the State of Massachusetts claims that fringe benefits paid in that state amount to 8.3 cents per hour more for their textile operatives than for textile operatives in the South. This additional benefit is made up of higher Workman's Compensation payments and Unemployment Insurance payments, both of which are determined not by the textile manufacturers themselves but by the state.

Point Of No Return. William A. Karl, general manager, textile division, Firestone Tire & Rubber Co., hinted at the gradual elimination of cotton as a factor in tire cord production. Speaking before the American Association of Textile Technologists, Mr. Karl said "If the supply were sufficient, all tires would be made with rayon or nylon because of the cost advantage." He predicted that cotton would have to go below 20 cents per pound before it can recapture its position. Annually, 700,000 bales of cotton are being displaced by high tenacity rayon yarn. He expects the price of nylon and rayon to go lower as production increases, and at the same time, technologists in this field will be improving their product. The development of an absolutely reliable flexing test, a method for adhering acetate yarn to rubber, and reduction of the regain in high tenacity rayon, are problems now confronting the tire industry. The textile technologist who solves them will be able to "write his own ticket," declared Mr. Karl.

What Made the Pants Too Long. Forstmann Woolen Mills has completed a study on the effect of humidity on the dimensions of wool fibers and fabrics which purports to prove that the reason for suits and other woolens coming out of shape, stretching, and shrinking can be found in the ordinary tailor shop which usually lacks humidity control. Mill conditions are not a factor.

American Workers Safer in 1949. Industrial injury rates for last year, released by the National Safety Council, show a substantial reduction in both the frequency and severity of 1949 accidents as compared with 1948. Thirty-eight of the 40 basic industry classifications reduced their frequency rates, and 28 reduced their severity rates. The accident frequency rate for employees in all industries, based on the number of disabling injuries per million manhours, was 10.14 in 1949, a reduction of 12 per cent from the year before.

WINS SUPERIOR SERVICE AWARD FOR MICROSCOPICAL TECHNIQUE

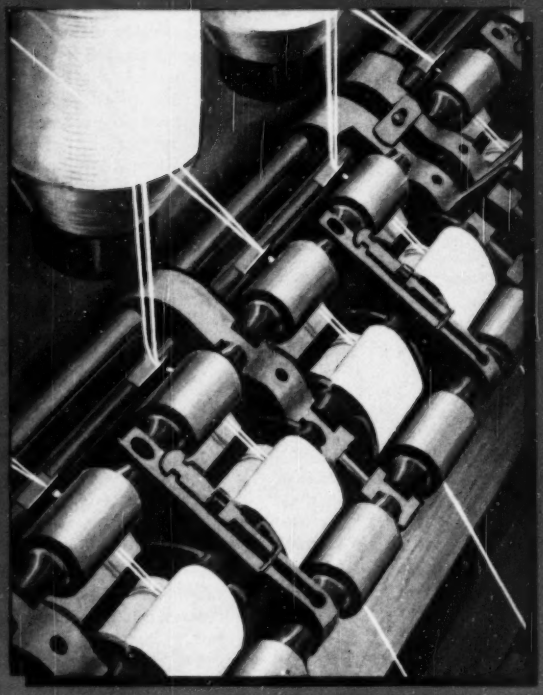
Miss Anna T. Moore of the Southern Regional Research Laboratory, New Orleans, La., has won a superior service award for the development of an improved microscopical method for the measurement of cross-sections of wet cotton fiber.

Miss Moore received the award from the Secretary of Agriculture, at a ceremony in Washington, for her contribution to the successful modification of the methacrylate embedding process to adapt the technique to the requirements of intensified investigations undertaken by the laboratory on the swelling of cotton fibers.

The modified technique has been successfully used in comparing mature and immature fibers from a number of different cotton samples with representative samples of other textile fibers. It has proved extremely valuable in research to improve the water resistance of cotton fabrics.

Miss Moore

Best in the long draft!



Dayco Long Draft Aprons last longer, give up to 10% more uniform yarn!

Here is a Dayco Long Draft Apron. It will outperform any apron on your frames, give you up to 10% more uniform yarn. It will stay on the frames when you start up, too.

This Dayco Apron is made in one endless piece, without laps or splices that can tear the sliver. Its thickness is uniform. (To get technical: inside diameters are held to a tolerance of 1/64", thickness to .050", plus or minus .002".) Such accuracy gives as much as 10% more uniform yarn. Correct friction coefficient on both inside and outside surfaces. Each apron is tested to meet customer specifications for single or double apron system.

The Dayco Long Draft Apron WILL: last longer, give more uniform yarn, handle natural and synthetic fibers equally well, keep yarn clean (white drafting surface). It WILL NOT: curl, split, crack, break, distort, stretch or groove. Won't flip off, pick up lint, mark the yarn, or be affected by heat, cold, oils, humidity, dyes or hard ends. To cut costs in your long draft operations, write:

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EXECUTIVE VIEWS

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

MANY REPORTS presented to textile gatherings are rather dull and uninteresting, and most of the listeners know in advance what the report will encompass. This was not true, however, of two reports made before the recent meeting of the Cotton Manufacturers Association of Georgia at Daytona Beach, Florida.

Reporting on public relations, Paul K. McKinney, Jr., Swift Manufacturing Company, Columbus, Georgia, made a very vivid and interesting presentation of his subject. Using two Florida bathing beauties as "stage props," he unveiled an attractively prepared booklet entitled, "The Future of Georgia Is Woven in Textiles" [photo page 103 this issue].

With the assistance of visual aids (we are not speaking now of the bathing beauties), he graphically illustrated the public relations points which the association was attempting to stress. It was the consensus that he had done an excellent job of holding the attention of his audience.

Textbooks Distort Industrial Relations

The report of Morris Bryan, Jr., president of Jefferson (Ga.) Mills, was presented in a different manner but was equally well received. Reporting for the association's Technical Institute Committee, Mr. Bryan made the very strong point that some of the textbooks now being used in textile schools give a distorted picture of the industrial relations existing in our mills.

He stressed the point that the minds of textile students were in the formative period and that what they studied in school was likely to make a lasting impression upon them. He urged that the Georgia association in cooperation with other similar organizations consider the possibility of preparing an industrial relations textbook, and he expressed the further thought that such a volume should contain information with regard to the history of the industry as well as data concerning some of the men who have made it great.

This report, like that of Mr. McKenney, was enthusiastically applauded. Both reports indicate that committee chairmen can hold the attention of conventions and they can present material which is timely, interesting, and to the point. These reports constitute a challenge to committee chairmen everywhere.

Wailing and Gnashing

Once again there is wailing and gnashing of teeth from New England. The governor of first one state and then another views with alarm the loss of the textile industry and points with anger and scorn to the southern region of the United States. The old charge of "stealing" New England mills has again been leveled at the cotton growing states south of the Potomac and east of the Appalachian Mountains.

Listening to all of this, the uninformed must have a picture of trucks moving silently northward across the Mason-Dixon Line, their drivers equipped with six-shooters and handle-bar mustaches, intent upon their nefarious scheme of stealing New England's textile mills. Those who are somewhat better informed, however, are aware that few, if any, textile plants have ever been stolen in this fashion. They realize that it would be more accurate to say that capital has been frightened away from New England and has sought greener pastures.

Out of this hue and cry has, nevertheless, come a great deal of good. Manufacturers in the South have realized, some of them for the first time, that what has happened in New England can happen in Georgia, Alabama, and the Carolinas. What is even more important, people in all walks of life —lawyers, doctors, school teachers, and even a few textile workers—have learned at long last that capital goes where it is wanted, and that without capital there can be no jobs.

Chester Bowles notwithstanding, it remains a fact that very few people, whether they come from Kennebunk, Maine, or from Siluria, Alabama, are going to invest their hard-earned cash unless they have some reasonable expectation

SAMPLE OF THE PLANNED ECONOMY

The following two paragraphs are reprinted from the Federal Reserve Bulletin for February, 1949, page 117:

Consumer Installment Credit

Suction Cleaners and Attachments

In the case of a vacuum or suction cleaner having attachments which are all dependent upon a single power unit for their operation and use, it is the Board's view that such attachments are "accessories" within the meaning of Section 8 (h) (7), if the vacuum cleaner (or power unit) and dependent attachments are sold at or about the same time. Thus, if the total price, including the cost of the attachments, is $50 or more, the regulation applies; but if the total price is less than $50 and if the customer does not buy the attachments, then the regulation would not apply.

On the other hand, if an upright brush-type vacuum cleaner, for example, is sold together with an independently powered and operated hand or "junior" vacuum cleaner at a combination price, then the transaction would fall within Section 6 (h) of the regulation. Of course, if each were sold on the basis of their individual prices, without reduction, the fact that the two were bought at or about the same time would not bring the transaction under Section 6 (h), nor would the hand vacuum cleaner ordinarily be considered "an accessory" under Section 8 (h) (7).—(*NAM NEWS*)

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- Resistant to laundering and dry cleaning.
- Easy to apply on conventional equipment; no curing required.
- Compatible in bath with other finishing materials.
- Impart slip proofing and snag resistance to woven and knitted goods.
- Binders for pigments and fillers.

STANDAFIN 77
Soft, full hand

STANDAFIN R-10
Firm, full hand

STANDAFIN 1220
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of getting it back when they need some money to go fishing or when they want to go to the World Series. In spite of what Mr. Bowles may say, some of these people in Kennebunk and in Siluria expect the money they invest to earn interest.

It is a hard and bitter pill to have to swallow, but we must realize that discriminatory and punitive government policies on the part of some of the New England states, the strangle hold of organized labor, and low productivity per man hour have been at least some of the reasons why New England woke up one morning to find that it was no longer the textile center of the world.

Little Eva

Some of those who would like to make political propaganda of this situation paint a picture which might come right out of "Uncle Tom's Cabin." The casual observer listening to them can almost see the hounds chasing Little Eva across the ice. These politicians, however, scrupulously refrain from telling us the name of the hound. The best remedy they have come up with so far is not one so simple as that of rescuing Little Eva, but instead they propose to sick the hounds on all of those mills from Virginia southward which have been designated as the culprits in this drama.

There is another lesson which we in the textile industry can learn from this. We can learn that the people who make our laws can also determine the destiny of our plants, regardless of whether those plants are located in the North, the South, the East, or the West. The laws they make and the taxes they levy can mean the difference between life and death. Unless we take an interest in politics, unless we are willing to sacrifice our time and energies toward the election of honest statesmen, then we should not complain too bitterly.

Fear Is Spreading

Another evidence of the power of government over private industry is being evidenced in the tariff negotiations which began in May. As the evidence mounts it begins to become apparent that even representatives of the State Department must be getting concerned.

One report indicates that by 1953 steel mills in Western Europe will be turning out eight million more tons of steel annually than that area can consume. Informed people are beginning to realize that Italy and England may one day be able to make electric refrigerators more cheaply than can the United States.

With the exception of a few groups such as the textile industry, the shoe industry, chemicals, and optical manufacturers, not many segments of the American population have been worried about foreign competition. Now, however, that we have spent something like nine billion dollars in Marshall Plan funds and have done our best to raise the productivity of foreign industries, some of us are beginning to wonder what sort of Plan the other nations of the world will use to help the United States if the day should come when we need it.

This may be a cynical outlook, but there is some doubt in the mind of this writer that the textile operatives of Rome (Italy) would be interested in contributing to a fund to help Rome (Georgia) textile operatives if and when we should find ourselves priced out of foreign markets and domestic markets. We have been paying the bill for so long that it has come to be accepted as a matter of routine.

The happy thought back of the Marshall Plan and back of the administration's concerted program to lower the tariff was that once we had set this shining example all other nations would open their doors to our products, and as a result more people in all countries would sell more goods, and there would be two chickens in every pot. The hard truth of it is, however, that most of these other nations have been laughing up their sleeves at us, and while we have lowered tariffs, they have placed new restrictions on American products.

The world, as someone has said, is in a sorry state of affairs.

July 19-20—31st annual session, **Southern Industrial Relations Conference,** Blue Ridge, N. C.

July 27-28—Cotton Research Congress, Baker Hotel, Dallas, Tex.

August 7-19—First United States International Trade Fair, Navy Pier, International Amphitheatre, Coliseum, and Arena, Chicago, Ill.

August 18-19 — Summer outing, **South Central Section, AATCC,** Read House, Hotel Patten and Country Club, Chattanooga, Tenn.

Sept. 5-9—American Chemical Society, National Chemical Exposition, Coliseum, Chicago, Ill.

Sept. 11-13 — Joint meeting, **Southern Combed Yarn Spinners' Association** and **Spinner-Breeder Conference,** El Paso, Texas.

Sept. 22-23 — Second **Canadian Textile Seminar,** Queen's University, Kingston, Ont., Canada.

September 23 — Southeastern Section, AATCC, LaGrange, Ga.

September 28-29 — Annual meeting, **National Association of Cotton Manufacturers,** New Ocean House, Swampscott, Mass.

Sept. 28-30—Annual convention, **American Association of Textile Chemists and Colorists,** Wentworth-by-the-Sea, Portsmouth, N. H.

September 30—Piedmont Division, STA, Charlotte Hotel, Charlotte, N. C.

Oct. 2-7—16th Southern Textile Exposition, Textile Hall, Greenville, S. C.

Oct. 11-21—International Exhibition of Knitting Machinery and Accessories, Granby Halls, Leicester, England.

Oct. 12-13—Annual meeting, **North Carolina Cotton Manufacturers Association,** Carolina Hotel, Pinehurst, N. C.

October 16-21—International Silk Congress, New York City.

Oct. 26-27—Annual Convention, **Carded Yarn Association,** Carolina Hotel, Pinehurst, N. C.

Oct. 28—Annual meeting, **Piedmont Section, AATCC,** Charlotte, N. C.

Nov. 16-17—Annual meeting, **Textile Research Institute,** Waldorf-Astoria Hotel, New York, N. Y.

Nov. 26-Dec. 1—Annual meeting, Textile Division, **American Society of Mechanical Engineers,** Hotel Statler, New York, N. Y.

Dec. 9—Southeastern Section AATCC, Atlanta, Ga.

1951

Jan. 22-24—Annual meeting, **National Cotton Council,** Hotel Buena Vista, Biloxi, Miss.

April 28-May 20—International Textile Exhibition, Parc des Expositions, Lille (Nord), France.

April 30-May 4—Knitting Arts Exposition, Atlantic City (N. J.) Auditorium.

April 30-May 4—National Materials Handling Exposition, International Amphitheater, Chicago, Ill.

SLASHING HINTS

No. 14 of a Series

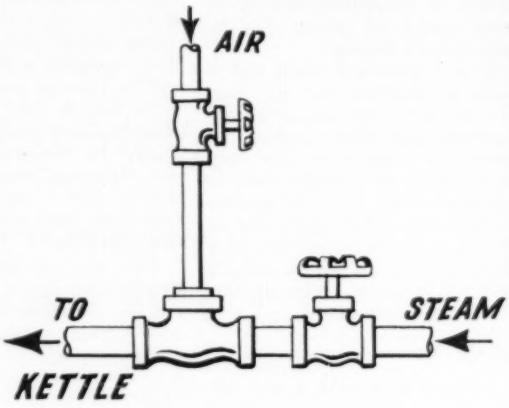
SIZE COOKING

IT often happens that a size cooker will be rushed to finish a few batches, and will not have sufficient time to stir his cold starch slurry.

When heating is begun before the lumps have become thoroughly dispersed, the outside of these lumps is cooked hard, preventing water from reaching the center. The resultant hard size lumps can cause much grief.

To obviate this, run an air line to the cooking coil. A constant rapid stream of air bubbles from the time the starch is first added gives so much better agitation than the paddles alone, that the cold-stirring time may be markedly decreased.

The air is turned off just before heating is begun.



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E. M. CROWLEY
Director of Research
Wortman, Wilcox & Co., Inc.
New York City

► The most complete discussion of this subject yet published appeared in TI, under title "Ramie Today." Reprints may be secured from Dr. J. L. Taylor, Georgia Institute of Technology, Atlanta, Ga.

To Readers Who Wish Back Issues

Frequently we get requests for back issues of TI. As much as we should like to fulfill every request, often our small supply of back issues precludes our serving readers in this respect. Often the interested party desires only one article in the issue, and if the name of the article is made known, we shall send tear sheets or reprints if we have them. Should we have neither (especially of old copies and for articles where demand has been great) an order blank for photographic reproduction will be sent.

"Compressive Shrinking"

"We are very much interested in the article on compressive shrinking . . . May issue of TEXTILE INDUSTRIES. If you have reprints, we would like to have six copies. Otherwise, kindly send us six copies of the complete magazine and we will cut out the article for future reference."

H. B. BECK
Wm. E. Hooper & Sons Co.
Philadelphia, Pa.

► Paul Seydel's article was reprinted by Seydel-Woolley & Co. Copies may be secured by addressing the company at 748 Rice St., N. W., Atlanta, Ga.

Votator

"Would you kindly forward me six reprints of the article 'Votator Offers Slasher Savings' which appeared in the January issue of your magazine."

ROBERT A. LEMIEUX
2839 Willow Dr.
Charlotte, N. C.

Doffer Incentive Plan

"Will you please send me a tear sheet from the March 1950 issue of TEXTILE INDUSTRIES 'Workable Incentive Plan for Doffers'?"

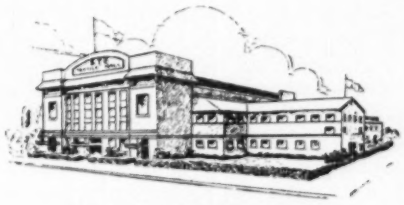
ALAN N. HORNE
Industrial Eng. Dept.
A. & M. Karagheusian, Inc.
Freehold, N. J.

Walker Abrader

"In the article 'Modified Abrasion Test for Warp Sizing Study' which appeared in TEXTILE INDUSTRIES for March, mention is made of the 'Walker Abrader.' Can you tell me where this machine may be purchased?"

J. H. PURSE
Research & Development
Carbide & Carbon Chem. Div.
Union Carbide & Carbon Corp.
South Charleston, W. Va.

► Sure thing. U. S. Testing Co., Hoboken, N. J.



THE GREENVILLE SHOW
(October 2-7)

This artist's sketch of Textile Hall will remind textile men of a familiar sight. They have been going to Southern Textile Expositions there for many years (depending on their ages). The next Greenville Show is to be held October 2-7. The last one was excellent; advance notices indicate this one will be even better. Adequate arrangements have been made for housing. Make your plans early for attending this show. For complete information on the exposition, see TI's September issue.

Employee Publications

"In the report made by the Productivity Team of the Cotton Spinning Industry bearing on their visit to America, reference is made to the various methods used in American mills to keep personnel advised of the firm's policy and progress. Broadsheets and works' newspapers are mentioned, and I wondered if, in your kindness, you could get for me specimens of a few of these publications."

M. MORRIS
Manager
Eckersleys, Ltd.
Wigan, England

► In our country we call them "employee publications," a valuable method of getting information to employees. Some people use the term "house organs," but most editors of employee publications don't like the name. Copies of those which cross our desk were sent. If others would send Mr. Morris copies, you would be rendering a service.

Core Testing of Wool

"We should be obliged if you would let us have three reprints of the symposium on 'Core Testing Wool.'"

L. STEVENS
Porritts & Spencer, Ltd.
Bamford Woolen Mills
Nr. Rochdale, England.

► Article appeared in January TI. This is a sample of the many requests that still come in for it.

Liked "Battery Fillers"

"Your April issue of TI was an exceptionally fine one. We would like to get reprints of the article 'Battery Fillers are Important People' on page 175-179. If reprints are not available, could we have permission to photostat the story for our training program."

R. A. FORSAITH
Strongwall Mills, Inc.
Cannelton, Ind.

► Permission granted. Many mills make such requests for TI's articles. All we ask [as our secretary says] is an "itsy" credit line.

Spool Sorter

"In the October 1949 issue an article appeared entitled 'Automatic Spool Sorter Solves Production Problem.' Would appreciate your sending me a copy."

JOHN V. CURRAN, JR.
Alexander Smith & Sons Carpet Co.
Yonkers, N. Y.

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Textile Industries
Vol. 114 • July 1950

A Progress Report on Experiments with

Automatic Overhead Loom Cleaning

Trial installation indicates overhead loom cleaner is justified if management expects and requires good housekeeping

EXCLUSIVE

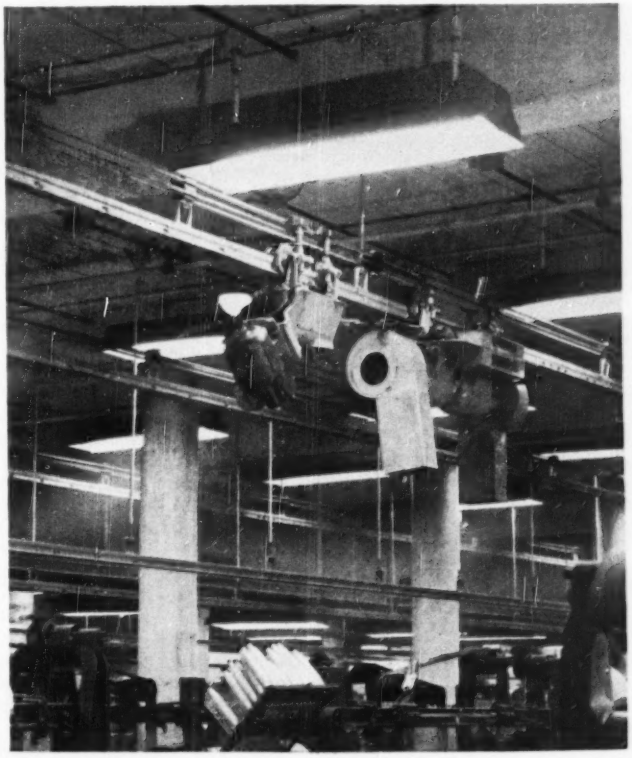
By a **MILL SUPERINTENDENT**

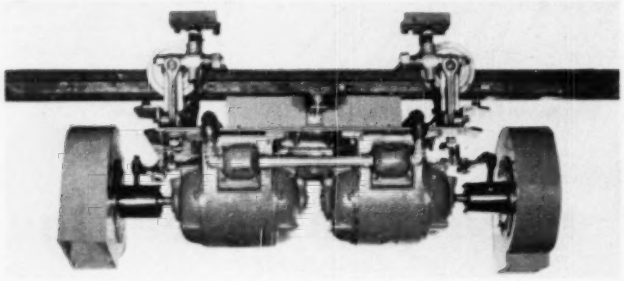
AFTER SEVERAL months of experimental work, a new, automatic overhead loom cleaner is in steady operation over 54 Draper looms at a large South Carolina mill which is weaving cotton and spun rayon gabardines. This cleaner is doing a good job; it is keeping looms clean and at the end of eight days, with no blow pipe having touched them, they look as good as looms which ordinarily have been blown off four hours previously.

Experiments. This new cleaner is different from the usual overhead blowers used in various textile plants. At first a standard type was used, and it worked fairly well when located so that it passed just a few inches above the dobby head. However, when used over more than one line of looms, there was no way to permit the blower to cross aisles as this particular weave room had the loom beam crane system, and when the blower was raised high enough to pass from line to line, the air velocity was not great enough at the loom level to show any advantage. Speeding up the fans and increasing the air blast succeeded in blowing fly from the looms, but the blast had to be so great that it disturbed the weavers and created so much air turbulence that fly was thrown all over the weave room.

It was then decided to try the principle of high velocity from concentrated jets of air directed toward limited critical areas of the loom, automatically repositioning these streams of air so as to completely cover the major portions of the loom over a period of time. This design was found to be

AUTOMATIC OVERHEAD LOOM CLEANER equipped with fan for keeping ceilings, lights, and ductwork blown down. Cleaner is doing a satisfactory job of cleaning looms by reducing blowing-down-with-air-hose interval.





CLOSE-UP OF LOOM CLEANER. Ceiling fan is not shown. Two high speed motors drive centrifugal blowers at extreme left and right sides of photo. Blower housings rotate through an arc so that the air stream may be directed to different areas of the looms on each trip.

satisfactory (it is the same principle used on the new spinning frame underframe cleaner) and after determining correct velocities and volumes, the present unit was built and installed by American MonoRail Company.

Construction of Cleaner. The cleaning system consists of a twin-motor traveling blower carried on an endless loop of overhead rail located directly over the looms. The rail loops back and forth over nine lines of looms, with six looms in each line. The cleaning unit, traveling at a speed of 150 feet per minute, is moved along the rail by a standard cleaner Monotractor, equipped with a ceiling fan. It is fitted with two high-speed motors, each driving a centrifugal blower.

The housings of the blowers rotate through an arc so that the air stream may be directed to different areas of the looms on each trip. Direction of the housings is handled by a simple cam mechanism. The volume of air supplied by the blower is controlled by varying the size of the housing inlet.

The cleaner does not operate on the looms alone; it also cleans from ceiling to floor. A ceiling fan connected to the unit does an effective job on the ceilings, lights, and ventilation ductwork, and the downward airstream does a good job of blowing loose fly into bunches on the floor.

Cleaning Effectiveness. The upper structure on the looms is kept quite clean of loose, fluffy fly; the warp beam is kept clean; and the drop wires and stop motion are largely if not entirely cleaned. The cleanliness of the harnesses and heddles is greatly improved, and there is less matting up at the harness. There are considerably fewer fluff balls. In fact, the air streams are of sufficient strength to reach down through the running warp and clean the girt and the principal machine members on the under side of the loom.

As with all automatic cleaning that is properly applied, the general effect is to blow down all loose fly while it is still in single fibers or before it has formed bunches. This fly is then rolled back and forth on the floor until it has gathered into relatively heavy bunches and is tightly packaged so that it may be easily handled by sweepers and cleaners.

Weave Room Appearance. In the weave room in which this cleaner is operated, the management feels that housekeeping is of prime importance both from a quality standpoint and from employee morale standpoint. It has been proved and has been generally agreed upon that housekeeping improves the morale and workmanship of an employee. The cleaner the working conditions, the better workmen can be expected and demanded.

No one tries to make a quality fabric unless he has good clean working conditions for his employees. For when the employees see that their surroundings are clean, it gives them that needed pride in their work. It has been noted in some plants that production has been raised and seconds have been reduced by nothing more than good clean working conditions.

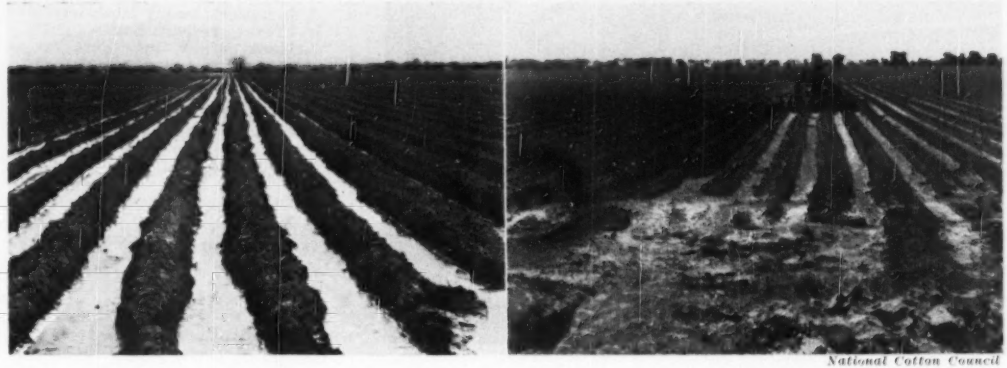
It is further generally agreed that when blowing-off looms with a blow pipe, regardless of how careful the operator is, a certain amount of oil and slubs would be woven into the fabric irrespective of whether this loom is stopped during the cleaning process or not. With the overhead cleaning taking this fly away immediately upon its settling on the looms and with the necessity of blowing-off being reduced from once daily to once each week, one can readily see the improvement in quality and the reduction of labor.

Where management expects and requires good housekeeping, it appears that the overhead cleaner can be justified and that the return on the investment will be good. It will keep floors much cleaner because it will eliminate that period of time daily when looms are being blown off, with the floors accumulating the waste until the sweeper can remove it. This waste is often trampled on and the grease is pressed into the floor.

The overhead cleaner should allow savings both in the loom cleaners required and the number of sweepers because the floor can be more easily swept under the looms which have the overhead cleaners.

However, it should be noted that more careful cleaning will be required when the warp is out to remove the oil and grease which have migrated, and, where there is high humidity, to remove the starch film that forms on the looms.

At present, this cleaner is installed both over cam and dobby looms; the cleaner is doing a much better job over the dobby heads than was expected. These looms are weaving a high sley cotton gabardine and spun rayon gabardine. The humidity in the weave room is maintained at 82.5% to 85%.



National Cotton Council

Irrigated Cotton

Factors for Consideration in Spinning

THE FIRST part of this article contains basic information concerning the various fiber properties which affect the spinnability of a cotton; it is well to review these factors.

The latter part of the article is a direct answer to some of the criticisms of irrigated stock made in the article "A Survey of Mill Methods of Running Irrigated Cotton," which appeared in the November 1949 issue of this magazine. Exception is also taken by the author to some of the methods used by the reporting mills.

"Textile Industries" is happy to present this article as a description of and a continuation of processing experience on irrigated cotton. Other comment is invited.—J. C. F.

By LYLE E. HESSLER
Cotton Research
Texas Technological College*
Lubbock, Texas

EXCLUSIVE

THE PHYSICAL character of cotton fiber determines its spinnability. Many properties enter into this character, such as length, length uniformity, strength, fineness, and degree of maturity.

Length. The length of the fiber is controlled by the variety; however, under some conditions of growth a long staple variety may be shorter than normally or a short staple cotton may be longer. Uniformity of length goes hand in hand with fiber length and is also governed by variety and growth conditions. Some years uniformity will be low, and as a result yarn strength will be less.

Strength. Strength may vary considerably from season to season. Rank growth invariably results in a weaker fiber, and growth with some stress for moisture usually produces a stronger fiber. Strength varies over the season, with the strongest cotton usually coming from the first picking. The length of time in the field, after opening, also may be a factor in strength.

Fiber Fineness. Fineness is governed by variety but may also be influenced by environment and time of picking. Finally, maturity is subject to the influence of variety, environment, season, and time of picking.

The foregoing are factors in physical properties of cotton fiber which can be readily measured and which play a part in the spinnability of cotton.

Other properties which are more difficult to determine are wall thickness, size of crystalites, and ratio of amorphous to crystaline cellulose. These are physical characters together with fineness

*One of the laboratories sponsored by The Cotton Research Committee of Texas

TESTING LAB AT TEXAS TECH. This modern testing laboratory is at Texas Technological College, Lubbock, where the college carries on testing and research on Texas cotton under the sponsorship of the Cotton Research Committee of Texas. One phase of the work is instrument blending of cotton for better and more uniform mixing of cotton in the mills.

which are perceptible to feel. They give the cotton fiber that silky feeling which an experienced cotton man can recognize immediately.

Resulting Yarn Strength. If the fiber is long, soft, and silky, exceedingly strong yarn usually will result. The thin walled fiber must rely on its drag in spinning from the convolution in the fiber, whereas the coarse, thick walled fibers have kinking or crimping of the fiber to produce drag. Since the number of fibers per unit area are greater in cases of the fine, thin walled fiber, greater strength can be expected from irrigated cotton.

Climatic Conditions and Spinnability. Whether the cotton is rain-grown, semi-irrigated, or entirely irrigated will in a large sense determine the physical character of the fiber and spinnability. Rain-grown cotton is dependent entirely on the elements for its water supply. A wet season usually results in a rank growing plant which produces fiber of little body and strength.

If moisture is lacking, stress for water may produce stronger fiber or underdevelopment may result in immature fiber. The growth control of semi-irrigated cotton will depend largely on the rainfall during the growing season. During a wet year the cotton may be rank in growth and a weaker fiber will be the result.

Regions of low rainfall, quite naturally, have a much better chance to control the water supply and produce a more uniform fiber. Cotton which depends entirely on irrigation for water can be grown under controlled conditions. If the water is added to produce a fiber of optimum physical character, a cotton of uniformity and quality is the result. Therefore, the cotton fiber which will meet top yarn specifications year after year is likely to be the cotton grown under conditions of controlled moisture. Thus, many of the physical properties that cause difficulties in spinning to some mills are the same properties which are so desirable for optimum yarn strength and grade.

THE MAIN PURPOSE of this report is to stress the important factor in spinning irrigated cotton and determine where difficulties may arise and how they are best overcome. A thorough understanding of fiber properties is always desirable; however, if this is not possible by instruments, a close inspection may bring out damage at the gin or lack of uniformity and weakness.

Gin and Insect Damage. Some early cotton goes to the gin green and is susceptible to overworking, which often results in irreparable damage even before the cotton reaches the mill. Cotton damaged by insects or disease and weakened through long standing in the field will, at times, not stand the stress placed on it by the process equipment for spinning. A close inspection of the raw cotton by fluffing and hand sampling will often show gin damage.

In good cotton, well ginned, there should be very few entangled masses of fibers. Weathering damages in the field are detected by a loss in strength, and this is often very noticeable by hand testing. At times such cotton takes on a dry, harsh feel and should be avoided.

Blending Not Recommended. Blending of irrigated cotton with rain-grown or coarser cottons is not recommended, because the net result, unless it is done by instruments, is a weaker yarn than either of the cottons spun separately would produce. (See TEXTILE INDUSTRIES, Nov. 1949, p 105.) Blending may improve the spinnability only if equipment is not in shape and geared to process fine cotton.

Maximum strength in blending is only obtained by using cotton of like fineness.

Opening and Picking. In the opening equipment no change is necessary; however, it is recommended that the grid bars on the beater be not over ¼ inch from the lugs. This distance will remove the motes whole and not allow them to pass on through the card and form neps as is the case if they are chopped up. Also this distance avoids matting and tangling of the cotton.

Bars are set close in the picker to avoid matting and tangling of the cotton. In some cases the tendency may be to produce more neps in irrigated cotton because of its physical character, though proper carding can readily reduce the nep count to a reasonable number. Therefore, too much stress cannot be placed on the card. The card must be vibration

free and in good repair for close setting.*

The speed should not be over six pounds per hour for good carding. Grinding and stripping should be done often enough to avoid rapid increases in nep count.

Cotton Sticking to Rolls. Reports of irrigated cotton sticking to rolls in drawing and spinning may be due to several causes. Since irrigated cotton has a lower moisture regain than rain-grown cotton and a high wax content, moisture may accumulate on the fiber under high conditions of humidity. Thus a soft, pliable fiber saturated with water will readily cling to the rolls. Such condition may be remedied by keeping the relative humidity under 60%.

Too dry an atmosphere may produce static and also cause clinging, a condition which is especially noticeable on dry windy days. Equipment in poor repair will cause fibers to cling to the rolls by setting up a vibration due to faulty bearings. Bearings should be checked at regular intervals and especially after fiber has had a tendency to cling to the rolls.

Exceedingly high wax content has been reported for irrigated cotton, and on the basis of wall thickness[5] and fineness of fiber, this is to be expected. A breakdown of the wax by overheating in drying cotton at the gin and long standing of the cotton in hot sun may very well develop a stickiness which under the proper conditions may have a tendency to cling to the rolls. This type of stickiness, however, is believed to be exceedingly rare, and the difficulty should be sought elsewhere.

Claims should never be made without some evidence to substantiate them; therefore, Table 1 shows a number of spinning tests on irrigated cotton conducted at Texas Technological College on a pilot plant scale. These tests are on most irrigated cotton varieties grown in the United States and cover nearly the entire irrigation belt from Texas to California.

Table I. Spinning Tests Showing Cotton Fineness, Nep Count and Yarn Grades

No. of Tests	Fineness Micrograms per inch range	Average	Nep Count 100 Sq. In. Carded Web range	Average	Yarn Grades on 22's Average
44	2.9 - 4.5	4.0	6 - 39	23.3	Very good or better

The finest cotton in the table had a nep count of 25 which is considered average. The highest nep count reported was also on a fine cotton of 3.0 micrograms per inch with 39 neps per 100 square inches of card web. That fineness of fiber is conducive to neppiness is shown by the correlation coefficient (r) = .74 for the 44 samples tested. The average nep count of 23.3 per 100 square inches of card web reported in the table is considered average and is about the average nep count of most mills on rain-grown cotton.

A cotton should never be condemned until the processing trouble is determined. The fiber may be at fault, but more than likely the trouble is in the equipment, conditioning, or the unwillingness of the operatives to make the proper adjustments to handle something a little different than the run of the mill.

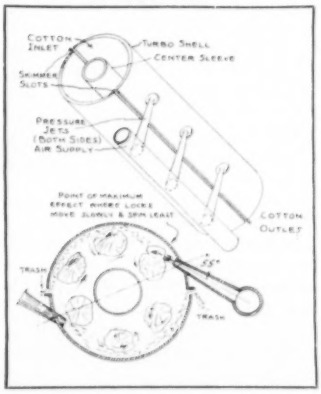
*Settings have been reported in Fiber Properties and Manufacturing Performance of El Paso Area Cotton and is available from Cotton Research, Texas Technological College, Lubbock, Tex. (Also see TEXTILE INDUSTRIES, April 1950, page 142.)

[5]A. N. J. Heyn, Textile Research Journal XIX, 711 (1949)

New Device Developed for Cleaning Mechanically Harvested Cotton

Development of a new device and process for removing trash and other foreign matter from seed cotton, has been announced by the U. S. Department of Agriculture.

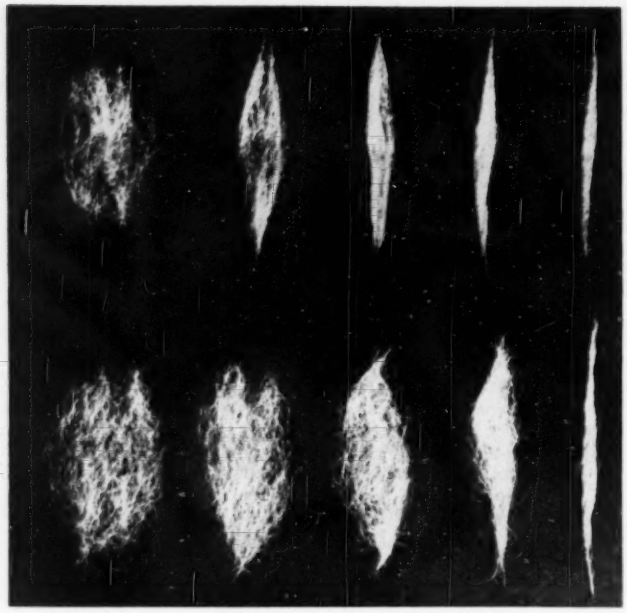
Sketch showing principle of operation of new device for removing trash and other foreign matter from seed cotton.

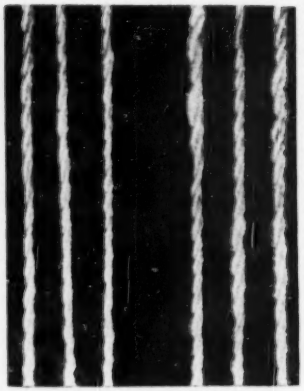


It consists of two concentric cylinders (one within the other). The cotton to be cleaned passes through the annular or ring-shaped space between the cylinders.

In the cleaning operation, air from a number of small pressure jets entering through the outside cylinder blasts any foreign material from the locks of cotton, which are held by their own inertia, until they begin to whirl. This process is repeated again and again. The dislodged trash is then skimmed off through the offset slot openings or skimmer lips.

The practical application of the new process will be an important step toward solving the trash removal problem resulting from mechanical harvesting, according to the Department.





▲ **GREATER FULLNESS** and loftiness of "Textralized" yarns (right) are apparent upon comparison of these yarn samples of equivalent weight.

◄ **IMPROVED CONDENSING** quality and greater bulkiness of the "Textralized" fibers (top) are shown in this photo comparing behavior of equivalent weights of crimped and naturally straight B. A. 36/40's wool.

"Textralizing" Process

Natural Fibers Crimped to Order

Crimp of wool fibers is utilized as a factor in production. Artificially produced, crimp is permanent and commercially feasible.

EXCLUSIVE

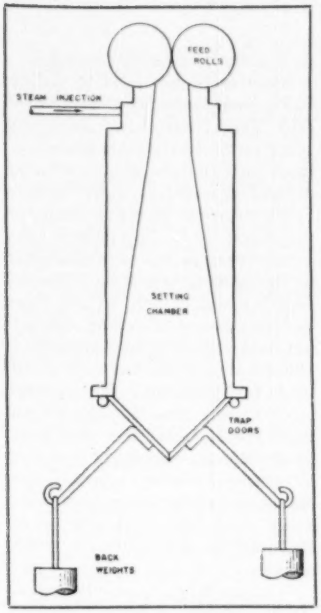
By PAUL M. PLATZMAN
Associate Editor

SCIENCE has been defined as "the exact measurement of natural phenomena." Judging from the near void in research literature dealing with crimp in wool, this fiber characteristic has long escaped the probe of science. Until very recently there has been little known and apparently little desire to know about crimp. Now, crimp is believed to be on its way to become as important a key to efficient wool manufacture as fiber length, strength, and fineness.

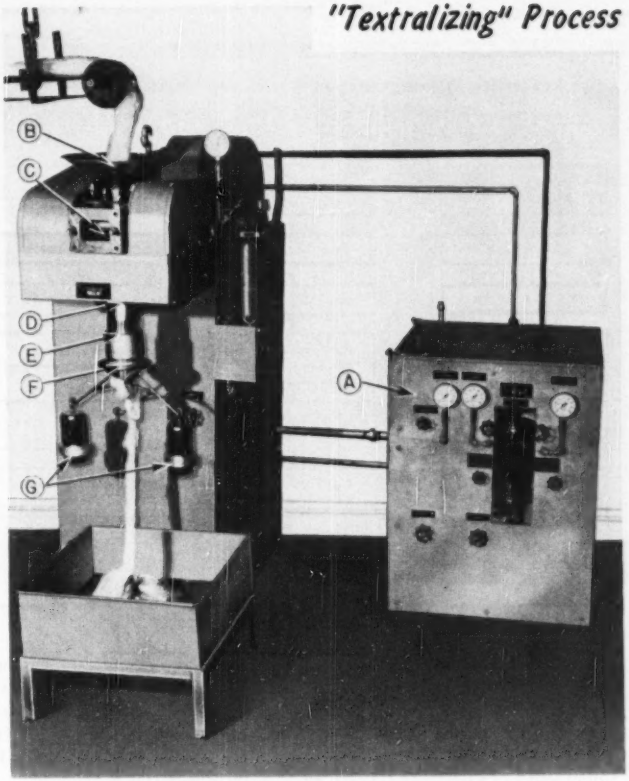
There is nothing revolutionary in the concept of crimp, but the means of measuring it, artificially inducing it, and using it on a controlled basis in wool mill operations are in this category.

Such has been achieved by the Alexander Smith and Sons Carpet Company, whose Research and Development Division has made possible "Textralizing." This invention permits crimping of natural fibers permanently on a practical, production-line system at low operating costs.

Announcement of the development comes at a crucial period when the world wool markets are troubled by shortages, fluctuating and high prices, government controlled production and sales, and the uncertainty of international trade. As artificial crimping gains



CRIMPING MECHANISM is shown schematically in this sketch. Feed rolls force fibers into conical setting chamber equipped at bottom with weighted trap doors to restrict flow of fibers. Restriction of fiber flow causes chamber to become filled with densely packed fiber. As new fiber is fed in it collapses against fiber mass already in chamber, causing an alternating folding of the fibers, which results in an angular crimp. While in this state of constriction, the fibers are subjected to setting agents in the presence of steam at 15 psi continually being injected into the chamber.



THE TEXTRALIZING MACHINE. Key to letters: A, supply unit equipped to provide setting agents under controlled conditions to one or more Textralizers; B, funnel guiding sliver into process unit; C, feed roll assembly; D, conical setting chamber; E, interchangeable setting chamber extension for use in providing variable volumes; F, trap door assembly to provide release of Textralized sliver from setting chamber; G, weights to provide back loading on trap doors.

acceptance in the industry, its potential influence on the wool economy is expected to make it one of the outstanding contributions of these times.

Of the many facets of crimping, manufacturing techniques, mill efficiency, and product styling will very likely henceforth be governed by the extensive utilization of this fiber characteristic. Yet, as late as 1948, there was so little interest in the subject that a research paper presented by J. Barach and L. Rainard, which paved the way for the new process, received little publicity.

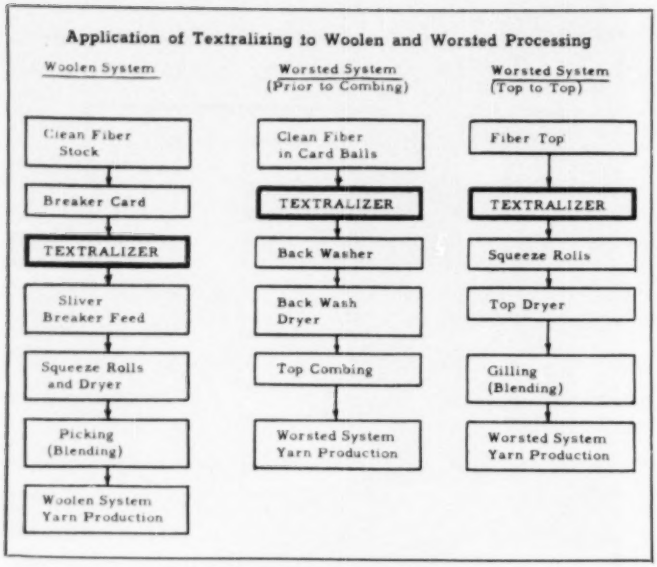
In the preceding year, attempts to gain recognition for crimp and establish a program for evaluating test methods brought no response from scientific and manufacturing circles; this despite a stimulated advancement in test techniques and related mill application of other fiber studies within the same period of time.

Information on crimp measurement, machinery, and influence at a gathering of scientists in the spring of 1950 caught the entire industry by surprise. Implications of this research paper captured the imagination of scientists and engineers. It has already been translated into production terms for the mill man by actual experience of the carpet company in wool crimping operations.

The Machine. Major components of the Textralizing process machine are: feed rolls, steam injection system, setting chamber, trap doors, and trap door back-weights. The feed rolls force carded fiber into the setting chamber whose trap doors and back-weights act as a restricting outlet. As the chamber loads, new fiber entering collapses against the densely packed contents. While in this state of constriction, the fibers are subjected to setting agents in the presence of steam at 15 psi continually being injected into the chamber.

The mass proceeds through the trap doors whose back-weights provide a balanced force so that the contact period for crimp setting may be ranged from 30 seconds to 3 minutes.

Among the variables which de-



termine configuration and permanency of crimp are: rate of input (controlled by speed of delivery), sliver weight (varies with card or yarn organization), steam temperature and pressure (regulated by valve), and back pressure (governed by load on trap doors).

Operation. The process as it is now in operation at the carpet mill calls for an extra battery of breaker cards, two being required for each crimping machine. Each card (48-inch diameter cylinder) feeds 150 pounds of scoured stock to a conveyor which transports two ropings to the feed rolls of the crimping apparatus.

Stock emerges from the machine in a damp state. It is delivered to the hopper of a picker which feeds an open stock dryer. After drying, the fully crimped fibers are returned to the opener room where they are blended with grease wools at a predetermined percentage.

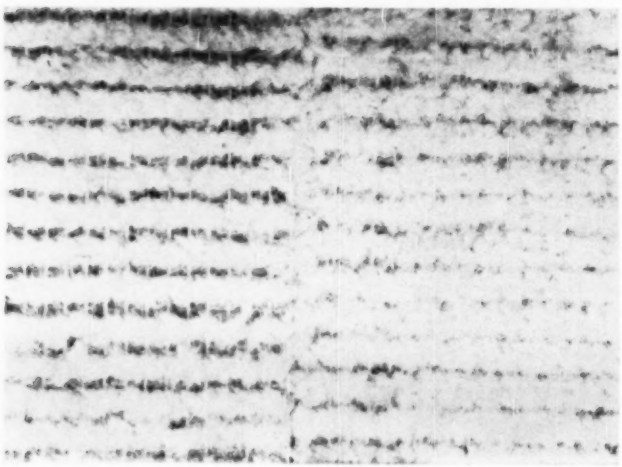
This layout is suited to the peculiar requirements of the carpet mill. The Textralizing process is sufficiently flexible to permit almost any conceivable variation, depending on mill requirements.

For example, if a percentage of the blend is to be crimped, this portion may be added to the blend at the picking operation following scouring and drying. In this manner the costs of reopening, rescouring, and repicking are avoided. If 100 per cent of the blends is scheduled for crimping, the crimped stock merely goes through normal mill stages with the additional Textralizing machinery set up anywhere between scouring and emulsion picking prior to carding. Stock dyed fibers can also be introduced to the crimping mechanism.

Once the fiber has been treated, stock dyeing, picking, carding, Peraltas, or any other subsequent phase of manufacture will not destroy the character of waviness, according to mill experience.

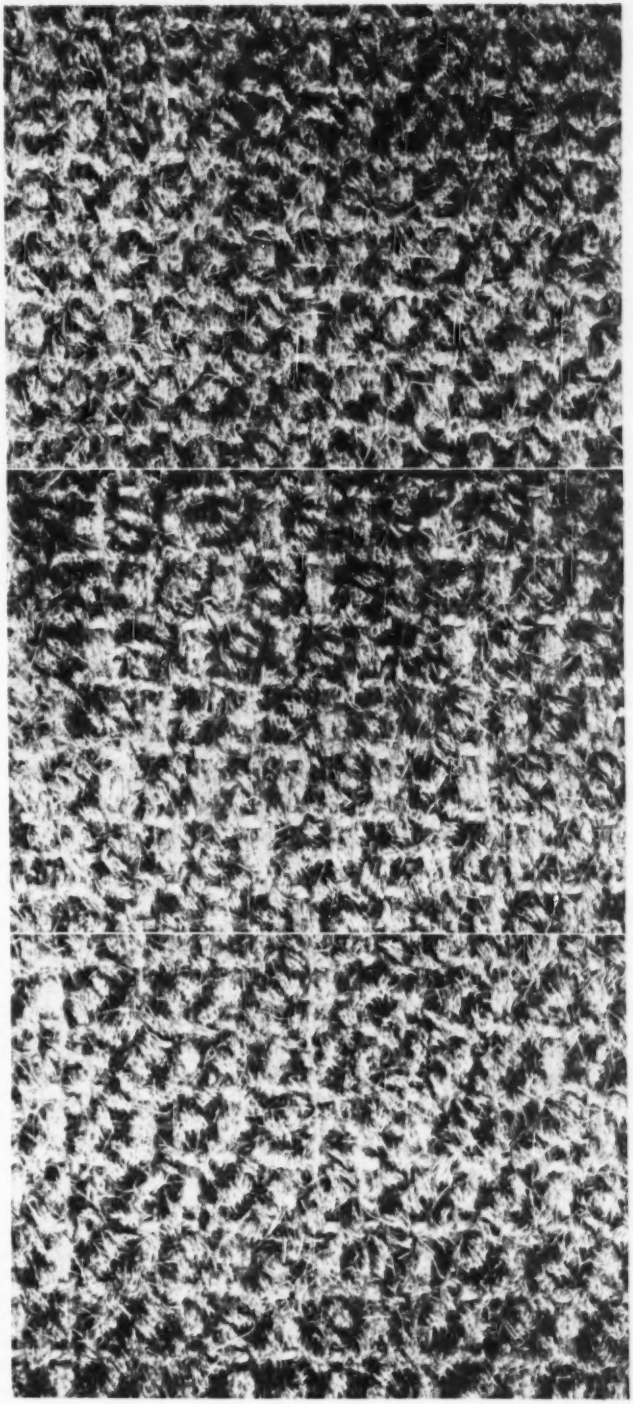
For the worsted manufacturer, there are several alternatives too. Stock may be crimped before making into tow. A "top to top" procedure is being worked out by Smith technicians which will permit treatment in a continuous flow following the combs for delivery to gill box, converter, or pin drafter.

Carding and Spinning. One of the preliminary findings has been that blends containing a percentage of Textralized fibers processed better in the carding and spinning departments. Roving required fewer rubbings at the condensers; ends down decreased; production went up. Cards could be speeded considerably since the time required to obtain condensing equilibrium (that point at which further rubbing produces no significant change in the character



FOUR-ROW AXMINSTER CARPET sample containing 100% B.A. 36/40's (left) in comparison with an equivalent weight of the same wools which have been Textralized. Notice the greatly improved evenness and cover of the Textralized portion.

PILED UPHOLSTERY FABRICS. These photographs show the improved quality obtainable at equivalent weights by the use of Textralized fibers. The sample in the upper photo contains 50% Textralized wools and mohair and 50% rayon. Yarn is of worsted 12s/2 construction. The standard fabric of similar fibers which have not been Textralized, also at 12s/2 weight, is shown in the center photo. In the lower photo is a fabric containing the same proportion of Textralized fibers and rayon but the yarn weight has been reduced to 14s/2. On many fabrics significantly lower yarn weights can be made to produce equivalent hand, cover, and abrasion resistance where Textralized fibers are utilized.



of the roving) was effectively shortened.

Advantages in crimping were also reflected on the spinning frames where there was a decided reduction in ends down. The higher tensile strength of finished yarn gave premium production throughout the remaining stages of manufacture. These results emphasize the possibility of using low cost fibers, or long silky fibers with poor spinning properties without interfering with efficiency—or using good fiber and further increasing efficiency—by the expedient of crimping.

All in all, this process means new versatility for the mill. The plant can now write specifications for creating desirable stock out of wool types that were formerly production headaches. Within certain limits, the wool buyer is almost independent of price fluctuations since the cheaper wools can be made to resemble wools more than 20 or 30 cents costlier at an economically low figure of from half a cent to five cents, depending on the spinning system.

Product Design. Wool crimping opens up an entirely unexplored field in the styling of fabric textures and constructions. One of the first attempts to utilize the new principle revealed that yarn weight may be reduced without loss of cover, hand, or wear. An experimental piece of cloth showed that weight reductions in excess of 20 per cent can be effected without noticeable difference in character

or life of fabric.

As M. L. Griggs, vice-president of the Alexander Smith & Co., states, "Such potential is significant not only in terms of raw material cost, but in view of consumer demand for lighter weight fabrics and garments." Interpreting this another way, it becomes obvious that:

1. A low weight yarn and fabric construction can develop the same coverage as a high weight construction without detracting from wear life.
2. The weight of fabric may remain the same, but coverage and wear life can be improved.

It does not follow that wear criteria are diminished due to a lighter construction with Textralized fibers. In some instances wear tests show a decided improvement.

This is explained by a theory propounded this year, and verified, which states that "crimping shapes the fiber into a structural member capable of absorbing energy." Consequently, work done on the fiber by impact or abrasion has a lesser destructive defect.

The application isn't limited to wool. Silk has been treated to resemble vicuna. Cotton, mohair, and a number of synthetic fibers indicate desirable susceptibility to crimping.

Royalties. Smith royalty policy, as announced by the company, is governed by the intent to accommodate the entire industry by charging the lowest possible royalty fee which will cover development and investigation costs.

The machine will probably cost in the neighbornood of $2,500 to $3,000. The figure is minute compared to its potential asset. This may best be illustrated by the following case:

Assuming that a mill can produce the same result in a fabric using a Textralized fiber or yarn 25 cents per pound cheaper than the previous blend, and adding the expected maximum cost for crimping of 5 cents per pound, the mill will save 60 dollars per hour per machine processing 300 pounds of stock hourly. This may be for a fraction of total production or for the entire mill output. Multiply this value by the actual number of pounds per hour necessary to sustain mill operations; extend this figure over a one year period; and the possible savings are electrifying.

The Functions of the Cotton Exchanges

By ALLISON H. PELL
Charlotte, N. C.

Without the Cotton Exchanges, the "History of Cotton" with all its glamour and romance, with all its tremendous influence on the wealth and well-being of our nation, could never be written in its present form.

The price of American cotton affected as it is by the whims of nature as to supply, by competition from foreign growths, by the ups and downs of the purchasing power of the buyers of the finished product, by the changes in the general economic condition, is subjected to wide variations. Any handler of a raw product subject to such wide changes in value, must start with a wide margin of profit, unless he has price insurance; and it is this insurance the Cotton Exchange furnishes.

This price insurance has made it possible for the cotton merchant to handle the farmer's crop at an average net profit of ½ to 1% of his gross business, and likewise, because the manufacturer can insure the price, excluding basis variations, of his raw supplies, he, too, is able to operate on a much narrower margin of profit.

This price insurance, then, is the primary function of the Cotton Exchange.

The exchange functions are divided mainly into four principal phases:

1st Function. To provide for the producer a wide market for his product as well as price insurance for his crop, as yet unharvested, or held for a higher basis.

The price level of New York contracts is the price the majority of the traders in the world feel American cotton is worth (whether on account of government loans or actual supply or demand). His market, price-wise, is a broad one. Any time the producer feels that he wants to sell on any given day, either his unharvested or harvested crop at what the world says it is worth, then all he has to do is sell contracts (in 100-bale units on the New York Exchange or 50 to 100-bale units on the New Orleans Exchange or Chicago Board of Trade) to protect his price until such time as he can sell his actual cotton to a cotton merchant or mill. Any subsequent changes in the prices on the exchanges will not affect him.

The broadness of the New York market is brought about, first, by buying and selling, by the cotton buyer or merchant, who is continuously buying contracts against sales to spinners or selling contracts against the purchase of raw cotton from the farmer. Second, by the purchase of contracts by the mill insuring their raw cotton prices against sales of the finished product or the sale of contracts against inventory, and, third, but far from least, the purchase or sale of contracts by the speculators.

This latter segment of trading is essential to a broad, evened mar-

From an address before the Alabama Cotton Manufacturers Association, Biloxi, Miss., April 29, 1950.

ket. It adds the necessary additional purchasing power in times of large movements of raw cotton. It provides the short selling of contracts when the markets would go above what, to the average mind, is the proper market level.

The broader the market, the nearer it reflects proper prices; hence, we should, all of us, who are dependent on the exchanges, resist the continuous efforts of past and present administrations, to shackle speculative trading by placing unreasonable margins against such trading. After all, it is the members of the New York Exchange, acting as futures brokers, who take the greatest risk in requiring small (in the mind of the government administration) margins against speculative accounts. Who, then, should be the best judge as to the amount of these margins? The broker or the government?

2nd Function. To provide price insurance to the cotton merchant, who, whether he is buying the farmer's product or selling to the spinner for months in advance, can protect himself against market fluctuations, by the use of the exchange. If it were not for this price insurance, the banks would require much larger margins against cotton loans and make it almost impossible for the merchant to buy and carry in part the cotton crop.

3rd Function. To provide the manufacturer with price insurance for his raw product as well as his inventory. How does this work? All of you have had some experience with this insurance—sometimes due to squeezes in the market, caused primarily by government loans, causing high prices at the end of one crop season as against a cheaper price for the new crop. This insurance for inventory is not 100%, but it can easily mean the difference between a small and a large loss.

How do you use futures contracts to insure your price of raw materials? First, in the purchase of futures at the time of the sale of goods, requiring cotton for fairly nearby consumption, thus allowing

(*Continued on page* 178)

Plant tours, music, entertainment for the children, product displays, and refreshments were on the program.

Republic Completes Modernization —Holds Open House

Staff Report

THOSE who planned the Open House Program for Republic Cotton Mills (a division of J. P. Stevens & Co.), Great Falls, S. C., did it up right. It was a truly successful party; everyone seemed to enjoy the occasion and left speaking kindly of the host.

The occasion was to celebrate the completion of the modernization program, concentrated on since 1946.

Plant tours were offered, as well as entertainment; the town was treated to a ball game at night.

Since there are three plants in the division, employees visited the other two. They commented on the cleanliness of the mills, but never failed to point out that this plant was no cleaner than their own, showing a spirit of friendly rivalry. Such a feeling of pride in their plant is a valuable factor in industrial relations.

Tips Learned from Republic's Open House: (1) A display of products is a must, preferably open so that visitors may handle the cloth. (2) Inspection trips through the plant mean a lot to the families of the employees. (3) Refreshments are an essential of every party; and pretty hostesses behind the refreshment counter are an added attraction. (4) Important new equipment should be pointed out on the inspection trips. (5) Entertainment for children is a big part of the program (Republic rented a merry-go-round for the day—not all riders were under sixteen). (6) Music tops off the program.

Quill Conveyor

Bobbin Handling Costs Materially Reduced

Staff Prepared

EXCLUSIVE

FORMERLY hand trucks were used to transport filling bobbins from the bobbin stripper to various supply stations in the plant at Mary Leila Cotton Mill, Inc., Greensboro, Ga. This practice made it necessary to carry empty bobbins in hand trucks to one location in spinning room No. 1 and another location in spinning room No. 2.

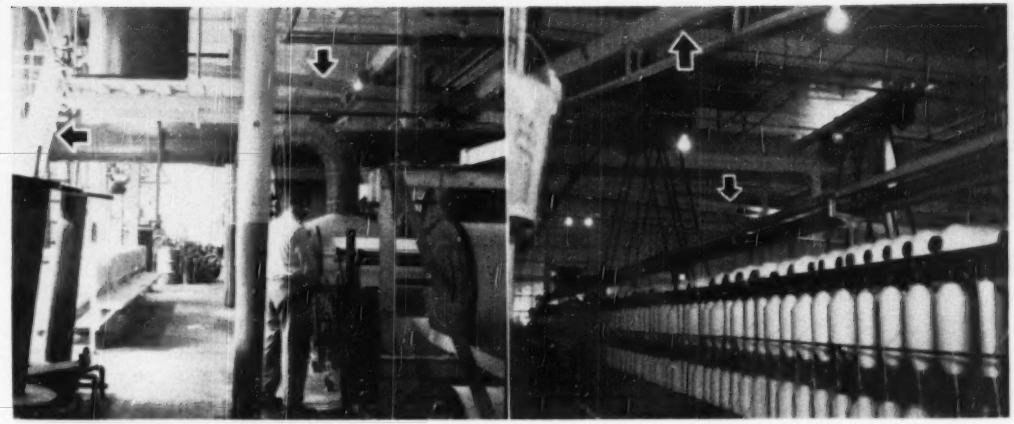
Usually six large hand trucks filled with empty bobbins from the stripper were brought to the spinning department where they were left for doffers to fill their buggies from. The stripper is located on the bottom floor of the building, and slow freight elevators had to be used in delivering the bobbin supply trucks to the second floor.

Using manpower to move the bobbins on the slow freight elevators made bobbin handling an expensive operation. The boxes of filling bobbins were difficult to unload in that the operatives had to remove the bobbins by hand, and it was necessary to stoop considerably while removing bobbins from the large boxes. Although boxes of various sizes were used, the average bobbin box used measures approximately 42" long x 17" wide x 31" high.

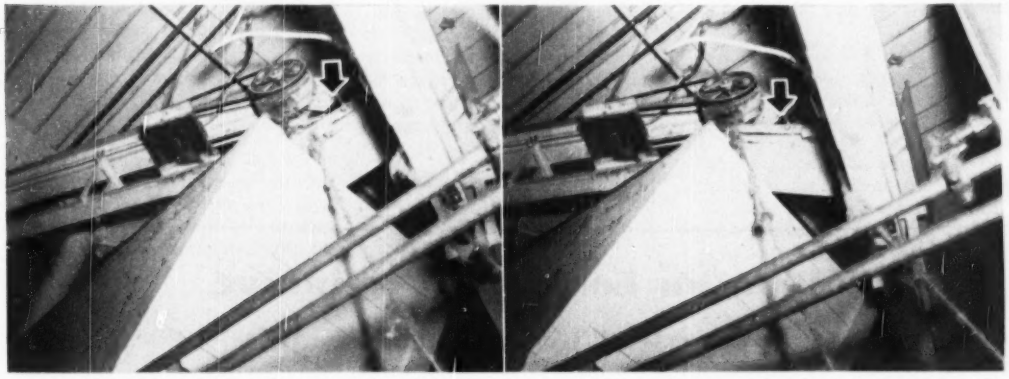
Conveyor and Storage Bins. A system was installed to reduce handling costs, and stationary storage bins are now used. The bins were constructed to allow easy loading of doff trucks, and the loading level is the same height from the floor as the top of the doff trucks. One major advantage of the new bobbin handling system is in supplying bobbins to points where they are needed and expending the least possible manpower in moving the bobbins to convenient and easily accessible storage facilities.

The system now in operation moves bobbins as fast as the stripper can clean them. The entire network of belts and troughs

SPECIAL LIFT ARRANGEMENT (left) accommodates trucks filled with empty bobbins. The bobbins are dumped into a chute which feeds the bobbin stripper. The lift was made in the mill shop, and it simplifies and speeds unloading bobbin trucks from the bottom floor weave room. The chute is connected to the same storage bin which receives bobbins from the chute on the second floor. Stripped bobbins (center) are directed into the first leg of the conveyor system. Right, stripper is located adjacent to the storage bin which supplies empty bobbins to the stripper, which in turn feeds the first leg of the conveyor.



CONVEYOR ENTERS SLASHER ROOM through floor near wall (left), continues upward to the ceiling, crosses the slasher room and continues through a wall into spinning room. Right, conveyor leg (top foreground) in spinning room feeds storage bin with empty bobbins for doffers in spinning room No. 2. Flow of bobbins to this bin can be diverted to another leg of the conveyor (center background) which feeds storage bin for spinning room No. 1.



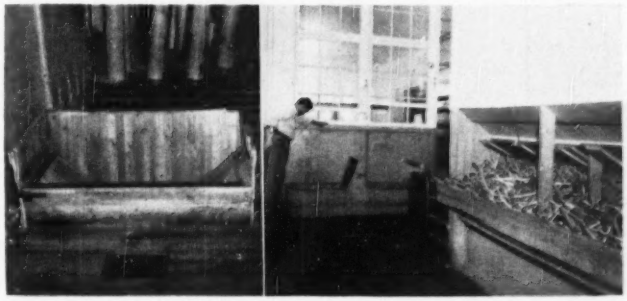
DEFLECTOR DIRECTS BOBBINS into storage bin in spinning room No. 2 (left). Right, position of deflector is altered manually to divert flow of bobbins into conveyor which feeds storage bin for spinning room No. 1.

is suspended from the ceiling overhead; therefore it does not occupy any valuable floor space. A master switch, located at the bobbin stripper, controls the electrical circuit to start or stop the bobbin conveyor.

A canvas belt with wood lugs spaced approximately 10" apart constitutes the carrying medium for moving the bobbins as they are received from the stripper. The first section of the belt running from the stripper to the floor above is approximately 30' long. The system is of metal construction throughout except for the canvas belt with wood lugs.

In No. 2 spinning room a

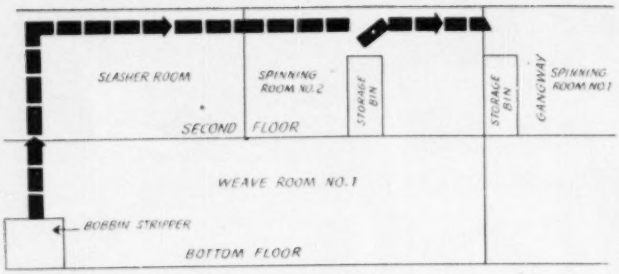
CHUTE FEEDS STORAGE BIN for the quill stripper located on bottom floor. This chute (left) is conveniently located on the second floor to receive filling bobbins from the weave room which is located on the same floor. Right, full bobbin chutes are connected to bottom floor storage bins. Operative from spinning room dumps full bobbins in proper section according to counts; then doff truck is filled with empty bobbins from storage bin at right.



damper (at No. 1 bin) controls the destination of bobbins in that they can be dropped into No. 1 bin or, by manually actuating the damper, they can be directed to the No. 2 bin. No. 1 storage bin is located in spinning room No. 2. Storage bin No. 2 is located in the gangway between spinnng room No. 1 and spinning room No. 2 (see sketch).

Full bobbin filling chutes are located near empty bobbin bins No. 1 and No. 2, and full bobbins are dumped in these chutes which are connected to storage bins located in weave room No. 1. Storage bins supplying full bobbins to weave room No. 1 and No. 2 are close to empty bobbin storage bins connected to the chutes. This makes it easy to supply full bobbins to the weave rooms and to move empty bobbins from looms to a chute connected to storage bin feeding the bobbin stripper.

Having the full bobbin chutes near the empty bobbin storage chutes is an advantage in that when a load of full bobbins is brought by doff truck from the spinning room, they are dumped in the proper chute, and a supply of empty bobbins is located nearby.



RELATIVE LOCATION OF DEPARTMENTS and components of the conveyor system are shown in this simplified diagram.

Costs. Three small electric motors are used to operate the conveyor, and power consumption is no more than it was formerly when using elevators to move the hand trucks from one floor to another. R. S. Kerr and Company, Atlanta, Ga., installed the facilities for handling bobbins in this plant.

Handling bobbins with the conveyor is much less costly, and it is much more efficient than the manual method which was discarded. In addition to being more convenient and faster than manual handling, upkeep on the conveyor system is negligible, according to the management at this mill.

Data on Long Draft Spinning

as practiced by 20 southern mills

(Information compiled by Miles A. Comer, southern representative, Saco-Lowell Shops.)

Type Yarn	Numbers	Ring Size (Inches)	Draft	Traverse (Inches)	Type Spindle	Staple (Inches)	Speed RPM
Filling	24s	2¼	27.00	8	Anti-Friction*	1 5/32	8500 to 10,000
Filling	36s	2	31.00	8	Anti-Friction*	1 5/32	8500 to 10,000
Warp	50s	1⅞	28.60	8	Anti-Friction*	1 5/32	8500 to 10,000
Filling	34s& 40s	1⅜	30.00	6½	Plain	1 1/8	10,000
Warp	20s	2¼	16.00	8½	Plain	15/16	8,800
Filling	34s	1⅜	30.00	6½	Plain	1 1/8	10,000
Warp	24s	2¼	30.00	8½	Anti-Friction*	1 3/32	9,000
Warp	29s	2	14.67	8	Anti-Friction*	1	10,250
Filling	42s	1⅜	16.80	6½	Plain	1 1/32	10,000
Warp	22.50s	2¼	17.05	8	Anti-Friction*	1 1/16	10,250
Warp	31s	2	31.00	8	Anti-Friction*	1 3/32	10,000
Warp	30s	2¼	17.14	8	Anti-Friction*	1 1/32	10,400
Filling	40s	1⅜	20.12	6¼	Plain	1 1/32	9,600
Warp	15s	3	13.64	9	Anti-Friction*	15/16	7,600
Warp	20s	2⅜	15.40	8½	Anti-Friction*	1 1/32	9,200
Warp	22s	2⅜	15.20	8½	Plain	1	8,500
Warp	30s	2	18.45	8	Anti-Friction*	1 1/16	10,250
Warp	14s	2	16.00	8	Anti-Friction*	1	8,500
Warp	14s	2⅛	17.00	8½	Anti-Friction*	1 1/32	8,400
Warp	40s	2	29.09	8	Anti-Friction*	1 1/8	8,100 to 10,000
Filling	13s	1⅝	18.60	8	Plain	1 1/16	8,000
Warp	30s	2	18.10	8	Plain	1 1/32	10,000

*Rubber mounted anti-friction.

New officers and board of governors of Southern Textile Association.

STA Annual Convention

Staff Report

THE FORTY-FIRST annual convention of the Southern Textile Association was held at Myrtle Beach, S. C., June 1-3. The three-day outing and business meeting featured golf, swimming, floor shows, and interesting addresses by men closely associated with the textile industry.

A. R. Marley, superintendent of Erwin Mills, Inc., Plant No. 2, Erwin, N. C., was elected president of the association for the ensuing year, succeeding Smith Crow, vice-president of Erlanger Mills, Inc., Lexington, N. C.

J. L. Delany, superintendent of Joanna (S. C.) Cotton Mills Company was elected vice-president of the association, and D. A. Purcell, superintendent of the Blanket Plant of Fieldcrest Mills, Inc., Draper, N. C., was made chairman of the board of governors.

Look to America for Leadership and Preservation. F. E. Bozeman, Jr., of Atkinson, Haserick & Co., Charlotte, N. C., who has made an inspection of European textile facilities, reported on his observations. "The people of England and other friends in Europe look to us [America] for leadership and preservation," he said. The people in those countries know of the aid America is giving them and they deeply appreciate it, according to the speaker. He forecast that those countries will come back to their former financial security, barring some unseen mishap.

Mr. Bozeman also pointed out that the English people are getting tired of socialism and they are beginning to realize that there is no such thing as something for nothing.

Research and Greek. Julius B. Goldberg, research director for J. P. Stevens & Co., Inc., spoke on research and some of the newer textile developments in the fields of fibers, chemicals, and textile machinery.

"Research need not be Greek to anyone if he is willing to use an interpreter, or if he makes an effort to have the long-haired scientist translate his theories and findings into basic English," said the speaker.

He then explained that complex mathematical formulas, chemical reactions, and technical terminology are undoubtedly necessary for the research physicists or chemists to converse with each other, but too often they are the terrifying Frankensteins that make corpses of the laymen who are supposed to be the beneficiaries.

Mr. Goldberg cited one of the great problems in the textile industry as being the translation into practice, production, and profit the theory behind research findings. But he maintained that a good job is being done by the textile industry in this respect.

At the final business session Robert C. Jackson, executive vice-president of the American Cotton Manufacturers Institute, reported on his recent trip to Japan with the unofficial American textile delegation, which studied textile conditions in that country.

Elections. Those elected to the board of governors of the association were: James A. Chapman, Jr., Riverdale Mills, Enoree, S. C.; J. L. James, Erwin Mills, Inc., Cooleemee, N. C.; R. C. Horner, Sterling Cotton Mills, Inc., Franklinton, N. C.; Walter Vincent, Dan River Mills, Inc., Danville, Va.; F. D. Lockman, Jr., Springs Cotton Mills, Fort Mill, S. C.; and H. C. Estes, Pacific Mills, Rhodiss, N. C.

John M. Reed of Charlotte, N. C., southern agent for Ashworth Bros., was elected chairman of the Associate Members' Division. Vassar Woolley of Seydel-Woolley & Co., Atlanta, Ga., was made vice-chairman.

Strength Test Evaluation Simplified

TABLE I

ROW / COL.	a LBS	b	c	d	e	f	g	h	i	j	k	l	m	n	o
A	LBS	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9				
B	0											16	0	16	0
C	1.0											91	91	91	91
D	2.0											139	78	55	31
E	3.0											128	384	–	–
F	4.0											61	244	–	–
G	5.0											15	75	–	–
H	–	62	58	40	57	63	36	49	44	44	47	500			
I	–	0	5.8	8.0	17.1	25.2	18.0	29.4	30.8	35.2	42.3				
J	–	26	17	19	36	25	27	34	36	23	19				
K	–	0	1.7	3.8	10.8	10.0	13.5	20.4	25.2	18.4	17.1				

TABLE 1. Showing how results of 500 breaking strength tests are recorded and evaluated.

Time Saving Method for Recording and Analyzing Results

MANY textile mills frequently make tests of yarn strength in an effort to determine product quality. Since strength varies from one specimen to another, many specimens must be tested before the mean strength can be obtained. Then, statistical methods must be applied to test results to obtain the "true" mean and coefficient of variation. Instruments for yarn testing are readily available and permit rapid tests, but evaluation of results is time consuming if longhand computations are done. When calculating machines are not used in the mill, any method which simplifies evaluation of test results should be of value to textile mill operators.

Sampling. Representative samples of a yarn can be obtained only by random (non-biased) selection from a bulk which is large enough to be truly indicative of mill output. The evaluation method presented in this article presumes random selection of yarns to be used for test purposes. Actual methods used for obtaining the yarn from a given bulk will not be discussed here because they are a function of the yarn type, test facilities available, and frequency of sampling.

Recording Data. The usual procedure when recording breaking strengths is to list them vertically in the order observed. While satisfactory for occasional tests, it is awkward when frequent tests are made. Besides, the time required to write each breaking strength value is greater than when a simple symbol is used to indicate the value.

Table I gives results of 500 breakage tests of a typical yarn. To tabulate a reading of, say, 5.3 lb, a single vertical mark is made opposite 5 and one opposite 0.3; for a reading of 4.1 lb, one mark would be made opposite 4 and one opposite 0.1. The time required to make the mark is less than that required to write the number, and accuracy is assured because all readings are clearly indicated. Evaluation of results is also simplified.

Evaluating Data. For statistical evaluation of a series of test data,

By TYLER G. HICKS
Mechanical Engineer

the mean value, its standard error, and the coefficient of variation must be determined. These terms are well understood by most operators of modern textile mills because analytical methods for determination of product quality have been in use for several years. However, for those who may be unfamiliar with the terms, brief definitions will be given. The mean value is self explanatory. Standard error of the mean is defined as follows:

$$\text{S.E.} = \frac{\sqrt{2\pi}}{N\sqrt{N}}\,(pM\text{-}S_m)$$

where π = 3.1416
N = total number of observations in the test
p = number of readings below the mean
M = mean value, in this case, lbs
S_m = sum of the readings below the mean

The coefficient of variation is defined as

$$\text{C.V.} = 100\,\frac{\sqrt{2\pi}}{N}\,(p - S_m/M)$$

and the mean as

$$M = S/N$$

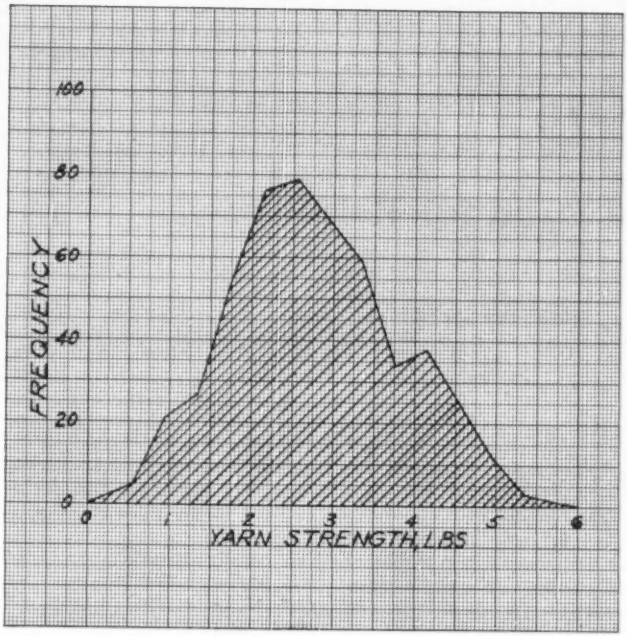


Fig. 1. Graphic presentation of test results. The frequency which may be expected of various breaking strengths is shown.

where S = sum of all test readings.

The data in Table I are evaluated as follows:

Find the sums of rows **B** through **G** and enter the respective values in column **l**. Then multiply the values in column **l** by those in column **a** to obtain column **m**. The values in row **H** are the sum of the values in each column, **a** through **k**. Next, multiply the values in row **H** by those in row **A** to obtain row **I**. From these data, S = 1172 + 211.8 = 1383.8, and

M = S/N = 1383.8/500 = 2.7676 lb.

To separate readings which are above and below the mean, 2.77, the heavy arrowed line is drawn. Then, column **n** gives the number of readings below the mean for each row, and row **J**, for each column. Similar to the previous products and sums found, column **o** is the product of column **a** and **n**, and row **k** is the product of row **A** and **J** Then,

$S_m = K + o = 401 + 120.9 = 521.9$.

To find the total number of readings below the mean, find the sum of row **J** or column **n**. As can be seen, this is equal to 262. Hence:

$$\text{S.E.} = \frac{\sqrt{2\,(3.1416)}}{500\,\sqrt{500}}\,(262\,[2.77] - 521.9) = 4.83$$

$$\text{and C.V.} = \frac{100\,\sqrt{6.28}}{500}\,(262 - \frac{521.9}{2.77}) = 37.1\%.$$

Thus, the complete data ordinarily included in breakage test evaluations have been determined quickly and without difficulty. Figure 1 is a plot of test results. It shows graphically the frequency which may be expected for various breaking strengths.

Notes on Tabulation. Location of the heavy arrowed line which separates values above and below the mean, Table I, is determined as follows. Readings accurate to the first decimal place were assumed to be taken in this test. Hence, all values recorded in the spaces up to and including 2.70 are considered to be below the mean, 2.77. Values of 2.8 and greater are above the mean and the arrowed line is drawn to separate 2.7 and 2.8. Where test readings accurate to two decimal places, say 4.46, are to be recorded, each reading would be mentally multiplied by 10 before insertion in the table. Results would be evaluated in the same manner as described and the data should be divided by 10 to obtain the actual values. For readings accurate to three decimal places, a factor of 100 can be used; for four decimal places, 1000.

In conventional yarn tests, the first entry in column **o** will always be zero if the first value in column **a** is also zero. However, where the first value in column **a** is different from zero, say with a yarn whose breaking strength is always greater than 20 lb, the first entry in column **o** will also be different from zero. Of course, table accuracy is not affected by these values, provided correct readings are entered.

Using Tabular Method. By exercising ingenuity, textile mill operators can apply this tabular method to all sorts of yarns. For instance, where the breaking strength ranges are smaller than those used in the example, the number of columns and rows can be reduced accordingly. With greater ranges, the number of columns and rows would be increased. Regardless of how readings may vary during the test, they can be tabulated quickly and accurately.

It should be noted that the mean obtained by the tabular method is exact. The standard error and coefficient of variation are, however, slightly inaccurate (less than 1% for conventional tests). The inaccuracy is slight and can be neglected in all conventional yarn tests which are made in mills.

Progressive mill operators throughout the world are making more extensive use of analytical methods in evaluating product quality. Since accurate tests combined with proper analyses are the only means for obtaining good estimates of product quality, every method which aids testing is worthwhile to the mill operator.

Canteen Profits

Provide Beneficial Fund for Employees

SHORTLY after Rock Hill Printing & Finishing Co. opened its plant in Rock Hill, S. C., Archie O. Joslin, now president of M. Lowenstein & Sons, Inc., had an idea that a beneficial fund could be financed by the sales from the company canteen. At that time the canteen was operated by an outsider who paid the company for the right to run the concession. The amount of money the company received was comparatively small, and there seemed to be no reason for the profit to go to an outsider for sales to the employees.

As a result of this idea, an organization known as The Beneficial Fund of the Rock Hill Printing & Finishing Co., was started in 1936. The idea was that the canteen would be operated for the employees and the profits should accrue to them through payments for medical and dental bills.

Through the years that the fund and the canteen have been in operation, a major business has gradually evolved until today the fund employs eight full-time and five

Staff Prepared

part-time operators, whose salaries it pays, and it operates four canteen wagons and 27 vending machines for soft drinks. It collects $160,000 yearly for sandwiches, soft drinks, milk, and other such light refreshments, and it shows a profit of about $25,000. Last year the canteen sold 16,000 cases of soft drinks. Besides this, the vending machines sell 17,000 bottles of soft drinks and 4,000 bottles of milk every week.

All of this money is used under the rules and regulations of the fund. The company furnishes hospitalization insurance to all employees without cost, but it is well recognized that this policy does not cover all of the cost of an operation. Also it does not cover the cost of drugs, dental work, glasses, or sicknesses at home. The fund helps where the hospitalization insurance is inadequate.

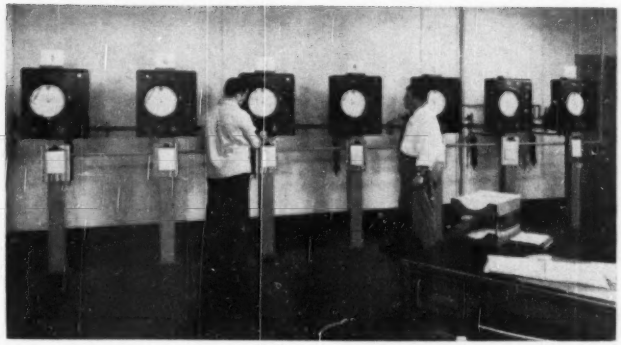
Every month the Fund Committee, composed of five employees elected annually by the entire working force of the plant, meets and hears the report of an outside auditor on the profits of the canteen during the preceding month. The committee then disburses the profit to employees who have turned in legitimate requests as outlined in the rules and regulations.

Generally speaking, the fund will pay approximately ⅓ of the cost of an operation over and above the amount paid by the hospitalization insurance. It also pays about the same proportion of medical charges for home illnesses. In some cases payment is made for operations and sicknesses of the employees' direct dependents. Payment is also made for dental work, glasses, and drugs for employees. For example, it is customary for the fund to pay $15.00 for a dental plate and $8.00 for glasses.

Rules and regulations are not rigid and inflexible. They may be and usually are changed slightly each year to adjust to new conditions. Payments may vary according to the canteen's profits, for it is the policy of the Fund Committee to pay out the full amount of the profits each year.

The fund is purely an employee's fund, and any employee, from top management down, may apply for benefits. In actual practice, few management employees use the fund, but it is there for them if they want it. There are approximately 2,600 employees, and with a profit of $25,000 a year, each and every employee could get $10.00 benefit, but payments amount to considerably more than this in view of the fact that requests come from only a part of the employees in any one year. Last year payments were made to approximately 1500 different employees.

The canteen collects $160,000 yearly for sandwiches, soft drinks, etc., showing a profit of approximately $25,000.



Instrumentation in Wool Dyeing

This interesting installation of automatic controls is found in the dye house office of a New England worsted plant. The recording controllers in the office of the overseer maintain complete automatic control of seven dye kettles in the adjoining dye house.

Courtesy, The Foxboro Co.

Dyeing Wool Stock, Tops, and Yarn

By ROBERT W. JOERGER

EXCLUSIVE

Article 3*: Chrome Dyes

THE MORDANTING of wool with metallic salts before dyeing with natural dyestuffs comes from ancient times. The methods used were adapted to coal-tar dyes during the last century though some of the older dyes, such as Logwood Black, still survive. Alizarine, made from the madder root, has been entirely replaced by the synthetic material; and for wool dyeing, the soluble sulphonate product is used.

Because of the limited range of dyes then available, a number of mordants were used — tin, iron, alum, copper, etc. But today chromium is the only one of importance that is used with the "chrome" dyes.

These dyes were especially made for the purpose; some of the important ones are derivatives of alizarine or anthraquinone but the majority of them (perhaps 75%) are azo compounds whose full shade and fastness are not obtained until combined with chromium on the wool fiber.

Methods of Application. The chromium is applied to the wool either before, after, or during the

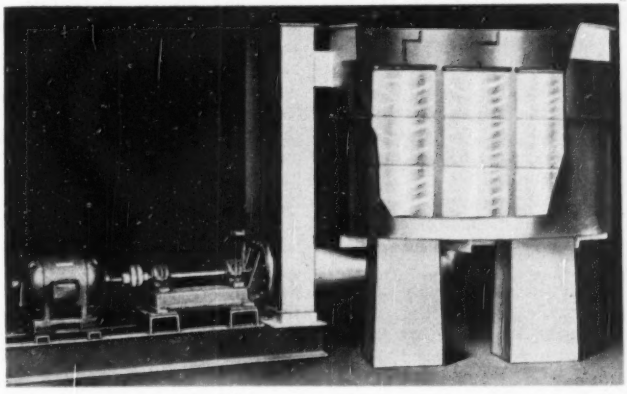
*Article 2 of this series was published in the May 1950 issue, beginning on page 119. Article 1 appeared in the April issue.

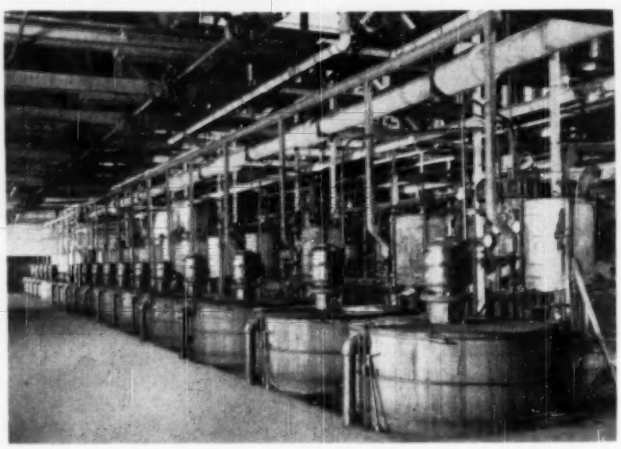
Obermaier-Stienen Spindle System Top Dyeing Machine

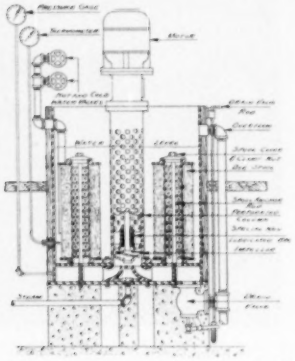
The design of this machine, the Model R A P R, which is used for dyeing worsted tops by the spindle system, is very similar to the previously described Model N U A P R wool raw stock dyeing machine, except that the dye vat is equipped with spindles to accommodate the worsted tops.

The worsted tops are placed over the spindles, and each spindle is adjusted for the proper amount of compression. The compression plates are so constructed that compression is accomplished by turning down the handle of the plates.

Courtesy, Standard Fabricators, Inc.







Above, cross sectional sketch of the Abbott kettle for dyeing tops.

Left, large installation of these kettles.

The Abbott Top Dyeing Process

The top sliver or slubbing is wound under tension on a perforated metal dye spool and is dyed on this spool which is locked in place over an orifice in a specially designed dye kettle, cross-sectional sketch of which is presented herewith.

Construction details and the principle of operation are apparent when a study of the drawing is made.

The machine has a false bottom. The impeller is rotated from a perpendicular shaft driven by a motor mounted on a perforated column outside and above the kettle. This column, with its motor assembly, may be easily removed as a unit.

The loaded spools are placed over specially designed orifices in the upper bottom, and the detachable plate clamp covering the

dyeing process. These three methods are generally referred to as *bottom chrome, top chrome, and metachrome* or chromate processes.

Some of the chrome dyes (such as most of the yellows and Erio Chrome Red G) work well with all three methods of application; others by two of them; yet quite a few have maximum fastness only when applied by the top chrome method. A rough count of the chrome dyes available shows that while all can be applied by the latter methods and about two-thirds on the bottom chrome, only about one-half are suitable as metachrome dyes where there are limiting conditions.

The advantanges and disadvantages of each method of chroming and the dyes used will be detailed later.

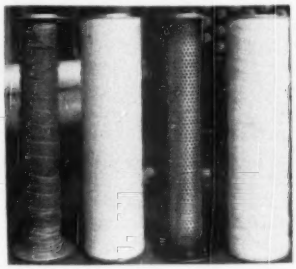
In addition to the true chrome colors, some dyes of the milling type, especially the anthraquinone derivatives, not only stand chrome but are actually made faster by it. Therefore, they can be used with the chrome colors for shading purposes or for brightness, while other acid dyes can be used where they can withstand the dyeing conditions or meet the fastness requirements.

The chrome dyes are used in all classes of wool dyeing and are quite necessary to obtain the darker shades such as blacks, navy blues, dark browns, and wines with any degree of fastness to such wet treatments as those that follow stock dyeing—where the bottom chrome and especially the top chrome methods are used. Generally, the shades are duller than those obtained with acid colors, but they can cover the great majority of tones needed on slubbing, pieces, and yarns, especially where fastness to wet treatments is important.

In the dyeing of worsted yarns for quality work such as knitting and hosiery, level dyeing acid colors are sometimes preferred for all except the darker shades since the harshening effect on the wool by the chrome mordant not only distracts from the "loftiness" but produces excessive wear on the knitting needles. Wool rags which are often stripped with bichrome and sulphuric, have essentially the bottom chrome treatment and may then be dyed with these dyes. Those stripped by hydrosulphite methods are more generally dyed by the top chrome process. In either case the cheaper, brighter colors are used.

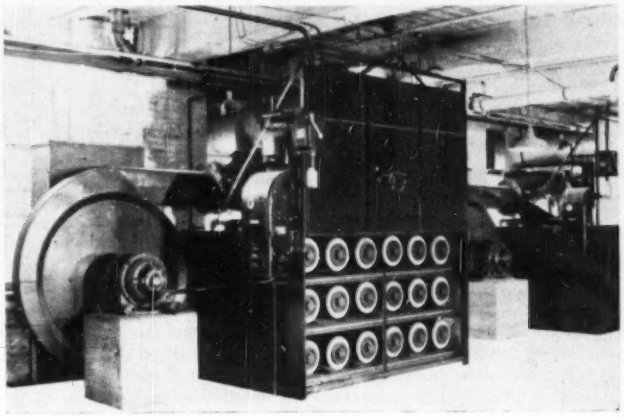
Bottom Chrome Method. In this method, the chrome is applied to the wool first and the dyes afterwards. It is a two-step process requiring twice as much time as the other two methods; thus it is used to a lesser degree today.

The simplest application consists of boiling the wool with 2 to 4% bichromate of soda or potash along with ½% acetic acid (28%) or in some cases with up to 1% sulphuric acid. The wool, first colored a bright yellow, gradually reduces the chromic acid to basic chromium oxides, in which form it is fixed on the fiber and reacts with



The two spools on the left are used for dyeing yarn. Note that barrel is covered with a blanket to keep the yarn clean. No outside cover is used on the yarn.

Wool top is dyed on the two spools on the right. Barrel is not covered. Cheesecloth is wrapped around outside of full spool for protection of top.



An installation photo of the Abbott 18-spool dryer.

upper opening of the spool is secured by tightening a nut placed on the exposed upper end of the stay rod. This holds the spool rigidly and seals securely both the upper and lower openings of the spool so that by necessity all circulation must pass through the perforations.

The circulation is downward into the compartment formed by the false bottom and upward through the spool, returning through the perforated central column.

Kettles are built for two, six, or 18 spools, and they may be used for dyeing less than full capacity with good results. Kettles are made of wood, with all aluminum or all stainless steel fittings.

After the spools of sliver are dyed, the excess liquor is removed by compressed air, and the spools are placed in a warm air dryer for drying prior to further processing.

Courtesy, Abbott Machine Co.

the dyes to form the wool-dye-chromium complex — a sturdy three-way combination.

Often the shade of the dye undergoes a radical change; thus, those of the chromotrope class are bright red acid dyes which are turned to black by the chroming. Since the reaction occurs on the chrome bottom, the shade change can be noted as the dyeing proceeds, making color matching relatively easy.

"Reduced" Chrome Method. A more uniform but slower and more expensive procedure is the "reduced" chrome method used for better quality of goods or when the dyestuff is destroyed by the other methods, such as with Brilliant Alizarine Blue 3R. The wool is treated with 1 to 3% bichrome and 1 to 3% cream of tartar (Argols) or such alternates as 1 to 2% formic, oxalic or lactic acid. In this case, the wool becomes olive green with a deposit of oxides of chrome.

In either case, the wool is entered into the bath containing these chemicals at 140 F, brought to a boil in 45 minutes, and boiled 1 to 1½ hours. After thorough rinsing, the dyeing is done with the chrome dyes essentially along the lines of acid dyes on untreated wool. The well dissolved dyes and 1 to 5% acetic acid (28%) are added at 120 F, brought to a boil in 45 minutes, and boiled 1 to 1½ hours. Where exceptional fastness is required, these dyeings may be given another treatment with chrome by the top chrome method.

Certain colors, such as Alizarine Blue S, are bisulphite compounds which decompose above the temperature of 160 F. Therefore, that temperature should not be exceeded lest a precipitate with poor rub fastness be deposited on the wool. This dye is also an example of one which gives a beautiful shade with excellent fastness to light on a copper mordant, but its fastness to wet treatment such as perspiration is inferior.

Logwood blacks are invariably dyed on a bottom prepared with bichrome and sulphuric. Though the resulting shade is not as fast to light as the best chrome blacks, it has much to recommend its continued use: a beautiful blue-black shade not at all rusty, excellent fastness to milling, and cheapness. It is applied chiefly on loose wool and yarn for wool hosiery.

Top Chrome Method. As the name implies, the chroming is done on top of the dyeing, and though less time is required than with the bottom chrome method, it is still a two-step process. All chrome dyes are suitable; some are of no value in shade or fastness until developed by the chroming.

In most instances, the dyeings are faster to rubbing, milling, and potting than with the same dyes applied on the bottom chrome. This is because less dye is precipitated by interaction with the chrome when proper precautions are taken to obtain a complete ex-

haust before the treatment with bichrome is given. This method also gives the best penetration, shows less fiber selectivity, shows the best fastness to milling, to steam, to acid and alkalies (as in the cases of perspiration and street dust), and to wear.

The main disadvantage is that the dyer does not know exactly what shade will be produced until the chroming is complete, making close matching very difficult. This may not be important with darker colors such as blacks, navy blues or browns, but in other cases shading with milling or acid dyes must be done afterwards, lengthening the dyeing process somewhat. The method is much used on loose wool or in top dyeing where the shades can be controlled by proper blending during the yarn manufacturing processes.

The dyeing of the unchromed wool is done in the same manner as the acid colors previously described. Control of this phase of the operation by an understanding of the time-temperature relationship, by pH or by special methods such as Goodall's method, has already been detailed; here it is only necessary to emphasize that an uneven dyeing cannot be corrected after the chroming because of the insoluble nature of the wool-dye-chrome complex.

Though the individuality of the dyes must be recognized, chrome dyes are generally applied with the use of 2 to 5% acetic acid; sometimes 10% Glauber's salt is added. The dyeing is started at 120 F, brought to a boil in 45 minutes, boiled 30 minutes and then 5 to 10% acetic acid or 1 to 3% sulphuric acid is added to exhaust the dyebath. If too much dyestuff remains in the dyebath at this point, chroming will convert it to an insoluble, precipitated color with poor fastness. To avoid this, some dyers do the chroming in a fresh bath, but generally the exhausted dyebath is cooled to 180 F, ¼ to 2% bichrome added, brought back to a boil and boiled 30 to 60 minutes.

The amount of bichromate of soda or potash needed is generally one-third the percentage of the dyestuff, though some dyes require much less. For instance only ¼% is needed for Dark Blue BS type dyes.

Sufficient time at the boil must be allowed to get the maximum chroming effect. Studies of chroming made with those red dyes which turn black when complete showed that the chroming, like the dyeing, proceeds from a ring penetration at the start to complete development within as the time is extended. In some cases this takes up to an hour; if the time is shortened the unchromed dye is left on the fiber, producing a color which may be neither the true shade nor have the best fastness.

Improper use of chrome has been previously mentioned but is summarized here. In the bottom chrome method, unfixed chrome or poorly rinsed goods may leave enough in the dyebath so that in the subsequent dyeing precipitates of loose nature are formed on the surface of the wool. The reverse happens when too much dye is left in the bath by the top chrome method — during the subsequent chroming it may be precipitated with inferior results. In the metachrome method, bichrome cannot be used at all with the dye or poor dyeings will be the result. The milder chromate of soda or potash is used under proper pH conditions.

(Continued in an early issue)

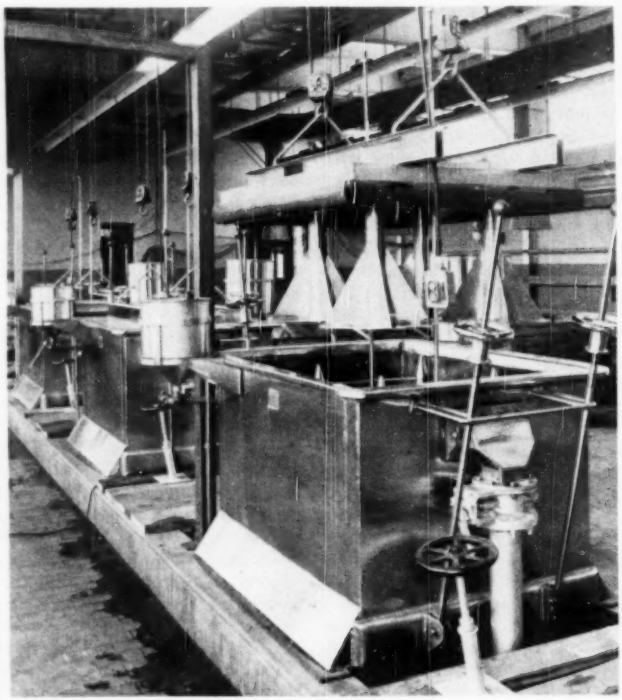
Allen-Worcester Top Dyeing Equipment

Made of stainless steel, this top dyeing machine is equipped with acid and dye tanks with controlled volume feeds, permitting the dye liquor to be properly mixed before reaching the tops. The entire process can be operated manually or by a cycle control.

Tanks are equipped with covers which eliminate disagreeable vapors while the machine is operating. The covers, when raised, serve to strip the tops from the spindles.

Unit is manufactured in five sizes: 150, 300, 450, 600, and 750-lb capacities.

Courtesy, William Allen Son's Co.



Maintenance Survey

By a Plant Engineer

THIS SURVEY will endeavor to summarize the present conditions of the plant, to investigate the possibilities of utilization of present space and equipment, and to suggest possibilities for improved conditions and better operating efficiency. The survey will deal with the subjects of power, lights, steam, air, humidification, and the buildings.

The recommendations offered are not necessarily the only or the best means or methods, but they are offered as a basis for further study leading to the best possible solutions. All the recommendations made will keep in mind the possibilities of expansion and modernization.

There are some items that are critical, and these will be dealt with first. The recommendations made for them will fit into the plans for the future.

Weave Room. The present roof of the weave room should be replaced this summer. The original design was poor, and years of neglect have deteriorated it to the point that it would be more economical to replace it than to attempt to repair. Numerous supporting timbers and a large portion of the decking have deterio-

This is a condensed version of an actual survey made by the Plant Engineer of a southern cotton mill. It shows the type of study all mills should make of their physical condition and needed improvements.

rated as the result of rot caused by leaks.

A competent engineering firm should be called on to design a flat roof on steel supports. The roof should be well insulated, and care should be exercised in the design to see that column spacing will conform to present loom alleys. It should be borne in mind that the trend is to loom beams 30" and larger in diameter, mounted above the loom. Beam handling for this type of beam is best done with chain hoist on bridge cranes swung from roof supports.

It is suggested that steps be taken to air condition this room by the use of air changers or some type of evaporative cooling system. The windows should be bricked up solid. The present trend in mill buildings is to eliminate all windows. Not only does this save considerably in the cost of air conditioning, but it avoids maintenance such as we now have with our box frames. Being exposed to high humidity on one side and outside weather on the other, the frames stay wet about nine months out of the year.

There is close to sufficient light in the weave room at present, but it should be rewired to a 3 wire, 220 - 110 volt system, and the lights should be properly hung on conduit. The current wiring system was designed for Cooper Hewitt lights, and the lay-out is not suited to fluorescent fixtures. This change will lengthen tube and starter life by eliminating excessive voltage drops to the end of the feeders. The foregoing suggestions, if put into effect, would be a definite aid to higher production and better quality by offering ideal atmospheric and lighting conditions for weaving.

It is estimated that the new roof, the air conditioning, and the re-wiring of the weave room would cost about $65,000.

Power Wiring. The most critical electrical condition in the mill at present is the wiring for the motor driven looms. The switches are antiquated, in poor condition, dangerous, and no longer obtainable for replacement except on special order. The company has already experienced one heavy fire loss due to this condition, and the weave room has been subjected to considerable lost time.

New switches, pedestals, and wiring with the proper protection and starting facilities should be installed. This can be done for approximately $3,000.

It is further suggested that a new sub-station be erected in the mill yard. This should be an open type sub-station with enclosed feeder circuit breakers of 400-amp capacity. A 400-amp circuit would serve the card room, opening and picking, and the waste house. A second 400-amp circuit would serve the weave room. A third would serve the dye-house, shop, compressors, and cloth room; and a fourth circuit would serve all spinning. Lighting transformers would be supplied from the weave room circuit.

The sub-station should provide for an additional 400-amp circuit for future expansion.

The present sub-station is overloaded and in poor repair. Several circuits are protected by open fuses without switches, and feeders from the transformer house to the mill building are crowded with strain insulators. The railroad has complained several times because the feeders are low enough to be dangerous to a man on a coal car.

It has been the policy of power companies to get transformers out of buildings, and it can be assumed that they will cooperate in moving the sub-station. It is estimated that this work could be done for $16,000 or less.

Steam. The two, 150 hp, HRT boilers are now operated with a peak load of close to 700 boiler hp. They are hand fired and are served by inadequate, home-made fans. It is necessary to pay a premium for a high volatile, high heat content coal which will operate under these conditions, and such coal is not always available.

It is suggested that the following be done to eliminate this condition:

1. Add overfeed stokers with combustion control.
2. Install a hot water heater for the dye-house.
3. Insulate the heaters, return lines, and steam lines.

While new overfeed stokers will cost about $12,000, including new refractories, increased efficiency would save, conservatively, $1,750 per year. Using a cheaper grade of coal would save a further $1,350 per year, and it is estimated that at least $600 could be saved on annual labor cost. This total savings amounts to $3,700 per year, which would amortize the first cost in about three to four years.

A heater for the dye-house would speed the dyeing process by elimination of the time required to heat cold water to operating temperature in the dye machines. By eliminating peak loads and providing condensate return, the installation will help improve boiler efficiency. A suitable tank and heater could be had for $4,500 or less.

Insulation for heaters, return lines, and steam lines would cost about $3,000, and it would provide savings in preventing heat losses during the months when heat is not needed in spaces now heated by bare pipes. Space heaters should be installed in these areas for comfort heating in winter.

Elevators: The present elevators are junk. They are a hazard to life and property, and they are outlawed in most states.

The three elevators used at present should be discarded and one new elevator reaching all floors installed in a central location. An enclosed fireproof stairway should be included when the elevator tower is constructed.

Compressors. The high pressure air system of the mill is inadequate. The present equipment will not furnish sufficient pressure for proper blowing off when there are a number of hoses being used at one time. The condition of the compressor is such that the insurance company will not accept the risk.

A compressor of higher capacity and a larger receiver should be added.

Miscellaneous. The present toi-

lets and plumbing are not up to the standards required. It is believed to be good policy to provide ample facilities which are easily kept clean but are not large enough to encourage loitering. Locker space should be provided in a wash room for shop men, section men, and fixers.

The floors in the spinning room, the weave room, the tie-in room, the warper room, and the spooler room are in poor condition. Most of these areas should be completely refloored.

The general condition of the walls of the mill buildings is good. On the other hand, about 40% of the sash in the buildings have rotted out bottom rails, which have been reinforced with steel angles. Some window frames are in poor condition. Replacement and repair should be done this spring, and all windows and frames should be painted in July or August.

A yarn and cloth testing laboratory with all the necessary facilities should be added on the second or third floor of the building now occupied by the warpers.

First Aid facilities should be provided at the supply room area.

Consideration should be given to adding a two-story section to the proposed new cloth room, this section to be used for office space for the General Manager, Payroll, Purchasing, Cost, and the Superintendent.

Condition of the mill houses is not good. Toilet and sewage facilities for them are very poor. Several of the houses need new roofs, and the majority need some repair work. All need paint both inside and out, not only for appearance but for preservation. Facilities for furnishing electricity are inadequate, and the best way to handle this would be to do the necessary work and then have the city install meters and furnish power.

Summary. It can be seen that a number of changes are necessary for efficient operation of the plant. An overall plan should be adopted, and once it is agreed upon, the work should be scheduled so that it will interfere as little as possible with plant operation.

It is not necessary that the program be completed in any given length of time, but it is highly important that critical conditions be corrected in the near future.

It is conscientiously believed that an undertaking of this program in its general scope will pay for itself in better production at lower cost, and that when completed, the mill will be ready for a sound program of gradual expansion of production capacity without too great an outlay of cash.

GEORGIA COTTON MANUFACTURERS CONVENE AT DAYTONA BEACH FOR ASSOCIATION'S GOLDEN JUBILEE

Top row: Outgoing association president **Barnard Murphy** (Riegel) passes the shuttle to incoming president **L. G. Hardman, Jr.** (Harmony Grove); **Paul K. McKenney, Jr.** (Swift) reports on activities of the public relations committee for past year and submits plans for next year's work. Daytona Beach Models assisted Mr. McKenney by distributing a public relations brochure prepared by the association.

Lower row: Three of the new association directors; left to right, **Gordon Dudley** (Athens Mfg.), **Paul McKenney** (Swift), and **W. C. Vereen** (Moultrie); chatting between business sessions, **T. F. Tift** (Piedmont), **Albert T. Mathews** (Martha), **J. C. Platt** (Chicopee), and **D. A. Jewell, Jr.** (Chickamauga).

MEMBERS of the Cotton Manufacturers Association of Georgia journeyed to Daytona Beach, Fla., for the Golden Jubilee convention of the association. The largest crowd in the association's history attended.

Officers elected for the ensuing year were: president, L. G. Hardman, Jr., Harmony Grove Mills, Inc., Commerce, Ga.; vice-president, Henry W. Swift, Swift Spinning Mills, Columbus; treasurer, Wyllys H. Taylor, Newnan (Ga.) Cotton Mills; executive vice-president, T. M. Forbes, Atlanta; and secretary, Frank L. Carter, Atlanta.

Norman E. Elsas of Fulton Bag & Cotton Mills, Atlanta, was elected president of the Georgia Textile Education Foundation, succeeding J. C. Platt of Chicopee Mfg. Corp.

Group picture of past presidents; left to right, **L. L. Jones** (Canton, seated), **D. A. Jewell, Jr.** (Chickamauga), **Paul K. McKenney** (Swift), **G. I. Parmenter** (Goodyear), **Norman Elsas** (Fulton Bag), **R. D. Harvey** (Pepperell), **Albert T. Mathews** (Martha, retired, lifetime association director), **A. Illges** (Swift Spin.), **A. B. Edge** (Callaway), **H. O. Ball** (Pepperton, seated), and their ladies.

The Guaranteed Annual Wage

"When an employer knows that he has to pay people on an annual basis, he must be either quite sure that he will need and can use the the services of those people, or he has got to make their wage rate low enough to cover the probable contingencies of his business."

DURING the second week in May, while the textile industry was putting on an exhibition of machinery and equipment in Atlantic City, in the same convention hall the CIO Steel Workers Union was putting on an exhibition of its socialistic wares to be offered the public at the earliest possible moment.

While the visitors at the textile machinery exhibition were examining new ideas for getting more production at less cost, the delegates to the steel workers' union were examining new ideas for getting less production at more cost. It seemed a rather ironic condition that in the same building, at the same time, there should be gathered people whose thoughts are constantly directed at producing more and better and cheaper goods for the public, and also a group of people whose waking hours seem to be principally concerned with schemes for producing less and dearer goods for the public.

The latest socialistic scheme put forth by the labor moguls at their convention was the guaranteed annual wage, which has been suggested from time to time for a good many years. The labor czars are either ignorant, or oblivious, of the fact that this invitation to poverty was in common use for centuries, and that the modern wage system was supposed to be a great improvement on it. Up until a relatively recent time practically all working people were paid by the year, and quite commonly at the end of the year, so that a man never saw his money during the year that he was earning it.

At the time of the American Revolution a typical workman in England received approximately twenty pounds a year, or about $100 in our money. By migrating to America he could get about thirty pounds a year, and it was this 50 per cent increase in earning capacity, in a land where food was cheaper than in England, which had a great deal to do with the settlement of this country during those times.

When an employer knows that he has to pay people on an annual basis, he must be either quite sure that he will need and can use the services of those people, or he has got to make their wage rate low enough to cover the probable contingencies of his business. When an employer paid a man $100 a year to work for him, he was pretty sure that he could get $100 worth of work out of the man during the year, and where he could hire a man on a daily or weekly basis, he would quite likely be willing to pay a much higher rate in order to be freed from the responsibility of taking care of the man during periods when he didn't need him.

A hundred dollars a year is about two dollars a week, counting out holidays, and an employer who only needed a man now and then might be able to pay three dollars a week, or maybe even four dollars a week, for a good workman during the period when he was needed. The present wage system seems to have largely grown out of this situation, and there is little doubt that the working man has been better off under this system than he was under the old arrangement where the employer had to gamble on needing the man, and necessarily had to hire the man cheaply to make the gamble worthwhile.

IF THERE is anything that we can be quite certain about, it is that in any insistence upon a guaranteed annual wage, the labor unions are not going to agree to share the slightest part of the employer's gamble. The employer will be expected to pay the highest possible wage that can be bludgeoned out of him with strike threats, and then guarantee this for the year, irrespective of whether his plant is running or shut down.

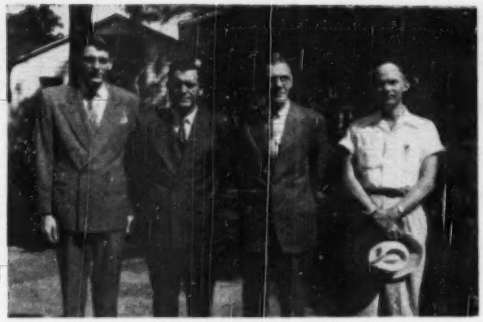
We believe that the guaranteed annual wage is so completely impractical in most industries that employers could never agree to it, but employers have agreed to a good many thing during the past 16 or 17 years that we never thought they would be foolish enough to agree to, and maybe they can be bulldozed into accepting this. It would be well, however, for them to start thinking about the terrible implications of any such socialistic proposal.

There are a few concerns in the United States which operate on the guaranteed wage basis, and there are probably a number of others which could operate on that

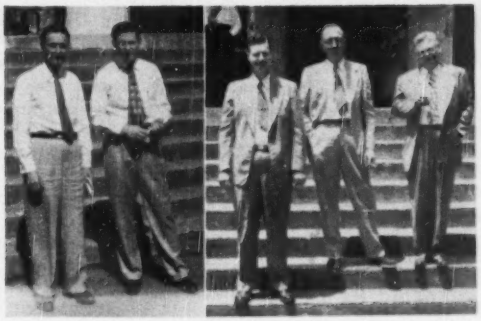
(*Continued on page* 182)

EXCLUSIVE

By RINGGOLD ARDEN



WAITING FOR THE MEETING TO START. Left to right: **Lamar Beach,** student in textile engineering at Alabama Polytechnic Institute and a delegation from Textron Southern's Cordova, Ala., plant—**W. H. Beach,** overseer of weaving and father of Lamar; **J. D. Whatley,** superintendent; and **L. Vickery** of the standards department.



BETWEEN SESSIONS. Left to right: **G. W. Morris,** superintendent of Birmingham plant of Avondale Mills, and **Grady H. James,** foreman of warp preparation; **W. A. Pearson,** assistant superintendent of Riegel Textile Corporation, Trion, Ga., plant, and two representatives of Dwight Mfg. Co., Huntsville—**W. T. Curry,** assistant overseer, and **C. H. Moody,** superintendent.

Slashing Discussion

Alabama Mill Men Meet in Auburn

Staff Report

MOISTURE CONTENT of cotton warps was the topic first discussed at the spring meeting of the Alabama Textile Operating Executives held in Auburn on Saturday morning, May 22.

The question, "What Per Cent Moisture should be left in a warp?" produced reports ranging from 6 to 8½%. However, an analysis of all answers indicates that the practice is to leave an average of from 7 to 7½% moisture in the warp as it comes from the slasher.

Moisture in Warps of High Construction. Two mill men were of the opinion that less moisture is required in warps of high construction:

Mill C. We leave from 6½ to 7½% moisture in our warps; however, we can't go to 7½% on our sateens (5000 to 6000 ends) because we get "curly headed" and crossed warps.

Mill I. 1 to 1½% less moisture is required for high constructions.

Another plant, **Mill G,** reported as follows: Usually a warp of high construction-heavy sley and pick will stay on a loom longer than a warp of low construction-low sley; hence moisture will have to be watched closely for fear of mildewed yarn unless sufficient preservative is used to prevent mildew; room humidity and temperature will help determine proper amount of moisture to insure good weaving yarn.

NEWLY ELECTED OFFICERS

General Chairman

R. B. Horsley, Cotton Mill Manager, Pepperell (Ala.) Mfg. Co.

Vice-General Chairman

J. W. Patterson, Superintendent, Tallassee (Ala.) Mills.

Secretary & Treasurer

Ben H. Crawford, Southeastern Engineering Co., West Point, Ga.

Executive Committee

D. H. Morgan, Superintendent, Alabama Mills, Wetumpka, Ala.

Jack Swann, General Manager, Chinnabee Mill Div., Wehadkee Yarn Mills, Talladega, Ala.

H. Grady Webb, Jr., Assistant Superintendent, Langdale (Ala.) Mill, West Point Mfg. Co.

The same moisture content should be maintained regardless of the construction, according to the experience in four mills:

Mill E. We don't change the moisture content of warps of higher construction; although if any change were made, the most moisture should be left in warps of lower construction due to the fact that they are woven faster and don't have time to regain the moisture that a slower running warp would have in the weave room. Average relative humidity in our weave room is 85%.

Mill F. We leave as close as possible to 7% moisture in all of our warps.

Mill H. We leave the same percentage (7½%) in all of our constructions which range from 40 x 38 to 114 x 58.

Mill K. Approximately the same.

Per Cent Size on Various Constructions. Of particular interest was the fact that six mills change the size applied to warps on the basis of the number of ends per

Alabama Slashing Discussion

★ **Amount of Size on Various Constructions**

★ **Wool-Nylon Blankets for Squeeze Rolls**

★ **Mill Experience with Homogenized Size**

inch in the woven fabric (sley):

Mill A. We increase the percentage size on all fabrics having higher than 88 sley; we increase percentage size where fabric has more than 48 picks per inch.

Mill C. We change at 96 sley.

Mill D. We use what we consider a light mix (14 ounces of starch per gallon) on styles having up to 88 sley, heavy mix (16 ounces) on styles with sley of 90 to 100, and extra heavy (18 ounces) where sley is over 100. Of course, the picks per inch have to be considered also.

Mill E. We increase our size formula on sets having as many as 64 picks per inch, warps of high construction using coarser reed.

Mill H. Change size above 64 sley.

Wool-Nylon Blankets for Squeeze Rolls. Longer life was the outstanding advantage cited by the four mills reporting on the use of blankets made of a mixture of wool and nylon for covering size box squeeze rolls.

One mill using blankets made from 50% wool and 50% nylon finds that they last from three to four times longer than the all-wool blankets; however, they collect lint and harden more quickly, with the result that they are used on the back rolls only in this plant.

Another mill man, when asked if he had experienced this difficulty, stated that he had not and was using the material on both front and back rolls. It was his experience that the wool-nylon blankets last twice as long as all-wool.

From the floor came the question "Has anyone using yarn-covered squeeze rolls changed over to these wool-nylon blankets?" No one had done this—comparisons cited were based on wool blankets only. One mill man did report, however, that there are two slashers in his plant—one is equipped with blanket-covered squeeze rolls but the other is still equipped with yarn covered rolls only because they cannot move the rolls.

It was interesting to hear the method by which hardening of rolls is avoided over week-end shut-down periods in this plant. Rolls are covered with a damp cloth and watchman is required to sprinkle more water on the cloth on his regular rounds through the slasher room.

Someone from the floor suggested that possibly the hardening of the wool-nylon blanket, as experienced by the one mill referred to above, could be due to the wool wearing out. Representative of the mill having this problem could not say whether this was the case or not.

"Is it necessary to increase the length of the wool-nylon blanket?" queried another interested participant. The answer was "no, cut these blankets the same length as the all-wool blankets."

Homogenized Size. Two rather complete reports of experience with equipment for homogenizing size mixtures were presented. These are tabulated in the accompanying box.

At **Mill C** two homogenizers are being used. All size mixes made for the past three weeks have been run through these machines. Experiments are still under way. Information given is, of course, based on this limited experience.

On the other hand, **Mill D** installed one 200-gallon homogenizer about eight months ago and now all sheeting looms and about 200 narrow looms are running on warps sized with a homogenized solution.

Scheduled cleaning of homogenizers was highly recommended as a preventive maintenance measure. Systems should be flushed out with water and thoroughly cleaned on week-ends. Valves should be dismantled once a week, thoroughly cleaned, and reassembled.

Both of the reporting mills feed the size to their homogenizers under 1500 psi pressure. When equipment was first installed in **Mill D** it was adjusted to operate at 500 psi. At this pressure it was found that it was not possible to get enough starch per finished gallon of size mixture. Accordingly, the pressure was gradually increased to a maximum of 1800 psi, with tests being made at various intermediate pressure points. Analysis of results dictated a return to the 1500 psi operating pressure.

When asked by a representative of **Mill C** if he found the homogenized size solution to be more adhesive with the result that there

ACTUAL MILL EXPERIENCE WITH HOMOGENIZING EQUIPMENT

	Mill D	Mill C
Savings	Starch costs reduced Steam consumption decreased	Starch costs reduced.
Effect on Weaving Efficiency	Unable to say since other changes were made in weave room at time homogenizing equipment was installed.	No improvement noted; however, mill is pleased with warps.
Effect on Shedding	Shedding decreased	Less shedding at slashers; smoother yarn produced.
Effect on Hard Size	Spots of hard size found previously have disappeared	Have had more, but this is believed to be due to lack of experience with equipment.
Trouble with Machines Clogging due to Foreign Particles	No serious trouble	Not since first week-end experience.

Alabama Slashing Discussion

★ **Homogenized Size (continued)**

★ **Viscometers on Slashers**

★ **Maintaining Straight Warps**

is more sticking of yarn on the cylinders, the manager of **Mill D** stated that this tendency was prevalent.

Concluding the discussion on homogenized size, someone cited another benefit to be derived from its use—improved slasher operation due to ease of keeping yarns in lease; it is much easier to tear the yarns apart at the lease rods.

Viscometers on Slashers. Four of the mills reporting at this meeting cited experience with the Viscometer, an instrument which automatically samples the size mixture at predetermined intervals, measures the viscosity, and makes a record of the results.

Mill A. We use a Viscometer on the size box of one of our slashers. It is a recording instrument only—not a control. The record is an indication of the viscosity of the entire mix, and it is used as a guide in the preparation of other mixes.

"What action do you take when you notice that the viscosity of a batch in the size box is off standard?" asked an interested mill superintendent from the floor.

"We don't take any corrective action on that particular batch, but when the next batch is made up the operator, being aware of the difficulty experienced with the preceding batch, will be more careful to match viscosities," replied the representative from Mill A.

At this point in the discussion, a Georgia mill man visiting the Alabama meeting volunteered the information that in his plant two stainless steel storage kettles are equipped with a Viscometer which not only records the results of its findings but also sounds a horn when the viscosity is other than normal. When asked what action is taken when signal is heard, it was stated that the operator immediately checks to see if he can determine the reason for the change in viscosity. In most instances the batch can be brought to proper viscosity.

Mill B. We have one Viscometer installed on the size box on one slasher. The only advantage we have found is that it does provide a record of the viscosity.

Mill G. We have experimented some with one Viscometer on the slasher size box. Results to date are unsatisfactory. Lines stop up too often. Haven't found proper screen to correct this condition which is probably due to the fact that we make osnaburgs and con-

METHODS USED TO MAINTAIN STRAIGHT WARPS

Mill A	Lease every other beam. Try to keep all ends in pattern. Lease after any trouble on set. Double pattern lease at tying-in machine.
Mill B	Count lease at front of slasher. Put in fine dent combs in slasher rake to reduce number of ends per dent and thereby prevent ends from rolling.
Mill C	Run lease strings every other warp. Maintain not over 7½% moisture to prevent ends curling. Careful preparation in tying-in department. Make sure return leases contain no missing ends.
Mill D	Run leases on slasher every 2500 yards, just after doffing beam. Use gummed tape on top and bottom of sheet of yarn when beam is doffed. Use lease rods at tying-in machine. Weave room inspects pattern before leasing out.
Mill E	Run lease strings every fourth warp and oftener if necessary. Check pattern all through set to keep ends in proper place. Check selvages to prevent rolling. Keep lease rods spaced properly so that shades will not roll together. Adjust tension cloths on drag roll to suit each set. Adjust weights on creel as necessary, taking off as much as possible as set runs down. Align beams in creel before pulling set through. Keep check on warper stop motion. Put gummed tape on each beam to hold ends straight before pulling set through. Doff warps with double row of tape about one yard apart, folding it around selvages flat in order to prevent rolled selvage and facilitate obtaining stright pattern at tying-in machine without too much waste. Run drop eyes in pattern sets to keep pattern straight and draft slasher patterns with same number of ends per dent in back as nearly as possible.
Mill F	End-to-end lease is put in at warper. When beams are creeled in, a sheet of yarn is run until it is straightened out and ends parallel; then it is pinned down with lease paper back of slasher size box.
Mill G	Slasher tender patrols in back of slashers and watches for laps. Runs strings as often as necessary to keep a straight lease on the yarn as it runs off onto the loom beam.
Mill H	Run lease strings as often as is necessary (at least every other warp). Use masking tape to keep ends straight for tying-in, one piece being at the end of the warp and the other approximately 14" from end. Insist on tying-in machine operator brushing pattern as nearly straight as possible. On wide sheeting looms lease each pattern before it is tied.
Mill I	Leave matter to discretion of slasher tender. To keep stripes straight, use drop wire just behind comb to separate one color group from another.
Mill J	Keep beam heads true. Place warps in hack evenly and keep them from rolling as they are wound onto the beam. Run lease strings every three warps. Keep number of ends per dent in the hack as low as possible. Adjust lease rods so yarn will not drag on hack.
Mill K	Have slasher tenders lease properly. Have tying-in machine operators brush and straighten pattern carefully. Have lease-out men use lease rods and tie warps on properly.

Alabama Slashing Discussion

★ **Slashers with Hot Air Dryers**

★ **Combination Hot Air and Cylinder Drying**

siderably more matter collects in the bottom of the size box. We expect to continue our experiments for a while longer.

Mill H. We have a Viscometer on our storage kettle using a circulating system. This Viscometer checks and records the viscosity of the size every three minutes. The advantages obtained are (1) a constant check on the viscosity of the size made, (2) different size formulas can be checked, (3) any breaking down of the size stored overnight can be noted, and (4) any variation in the fluidity of the starch used can be seen.

Maintaining Straight Warps. There was no uniform practice among the mills with regard to methods for maintaining straight warps. Suggestions reported are tabulated in the box on page 107.

Slashers with Hot Air Dryers. A very complete report of results obtained with a year-old Uxbridge "gentle air" installation was presented to the group. In view of the interest in this subject, the report is published in its entirety in the accompanying box.

Practically the same results have been obtained with another hot air slasher that has been in operation for approximately three and one-half years. Instead of being equipped with steam heating units as in the case of the Uxbridge slasher previously discussed, this oven is fitted with gas burners. It is said to be particularly efficient for processing of warps for narrow fabrics. 30s and 40s yarns for the manufacture of dress goods are being sized on this machine.

Additional information regarding the Uxbridge unit, produced as a result of questions from the floor, is as follows:

A minimum steam pressure of 100 psi is required for efficient operation. Moisture and stretch controls are utilized; wet splitting of yarns; double size box employed. In the opinion of the mill representative it is practical to replace present equipment with this unit, particularly on coarse work; he did not think it practical on fine numbers.

Finally, another hot-air slasher installation was described which utilizes vaporized fuel oil in the generation of superheated steam. The ovens develop temperatures ranging from approximately 400 F

MILL REPORT ON HOT AIR SLASHER INSTALLATION

WE HAVE one hot air slasher that has been in operation for more than a year. This slasher is the Uxbridge type in which the yarn is either separated to a 50 per cent split or a 25 per cent split before entering the first drying chamber. This means that the yarn gets approximately 60 per cent of its drying with a vertical separation before it reaches its first contact roll.

After the first contact roll the yarn is in a flat sheet and passes over three more contact rolls before going to the head of the slasher. This unit has five high pressure steam heating units which furnish hot air through a system of ducts that is directed through the strands of yarn while it is being dried. Two sets of fans force the hot air through the ducts and one exhaust fan takes care of the removal of the damp air.

We have been checking this slasher since its installation and we report the following results:

An increase in speed and production of approximately 60 per cent can be expected. Our standard on one style on the Uxbridge slasher is 64 yards per minute compared with 40 yards per minute on the conventional three-cylinder slasher.

By tests we have estimated our steam cost to be 88 cents per hour on the Uxbridge slasher and 60 cents per hour on the three-cylinder slasher made up of two 7-foot and one 5-foot cylinders. On a cost per pound basis of yarn produced, the Uxbridge slasher operates slightly cheaper. However, for all practical purposes, we would say the cost per pound of yarn would be the same.

Single end breaking strength and elongation is practically the same for all comparative purposes. This also holds true for stretch, which we try to hold at about 1½ per cent on both slashers.

On tests we have made to date, the Uxbridge slasher puts on slightly more size. We think this is due to increased speed.

On extensive loom tests which we ran for more than 2000 hours, the warp stops figure 7 per cent less from the Uxbridge slasher.

By observing cross sections of the yarn under a microscope, it is found that the Uxbridge slasher gives a yarn which is more round and which seems to have less protruding fibers.

We are operating this slasher in conjunction with a multi-motor variable speed drive and moisture control. The temperature inside the unit runs slightly over 300 F. When the slasher is stopped the unit cools instantly, and one can enter immediately after slasher is stopped.

We are running this slasher on 4752 ends of 17s yarn, made up 11 section beams with 432 ends per beam.

We have noticed that there is less shedding under the head end of the Uxbridge slasher as compared with the conventional slasher. Checks in the weave room, however, do not show any noticeable difference in shedding.

The unit is well insulated and very little heat is given off into the room. All in all, up to the present time this slasher is doing everything we expected of it.

at the entrance to 200 F at the delivery end.

This method of drying was reported to afford a 288% higher production than the two-can type slasher, 119% higher production than the three-can (7′-5′-5′) type, and 75% higher production than the three-can (7′-7′-5′) type.

Sized yarns are dried at a rate of approximately 1000 lb per hour, or moisture or water is removed at a rate of from 450 to 600 lb per hour. This method of drying appears to be cheaper than with steam due to the lower B.T.U. requirement, according to the report.

Combination Hot-Air and Cylinder Drying. One mill reporting at this meeting has used a combination hot-air and cylinder dryer type slasher for approximately a year and one-half. Production efficiency is said to be as good as that obtained on the conventional three-cylinder slasher; quality is also as good. Dripping of condensate from hoods is eliminated. Steam cost is slightly higher.

(*Weaving Discussion next issue*)

Gregg Dyeing and Finishing Plant Completed

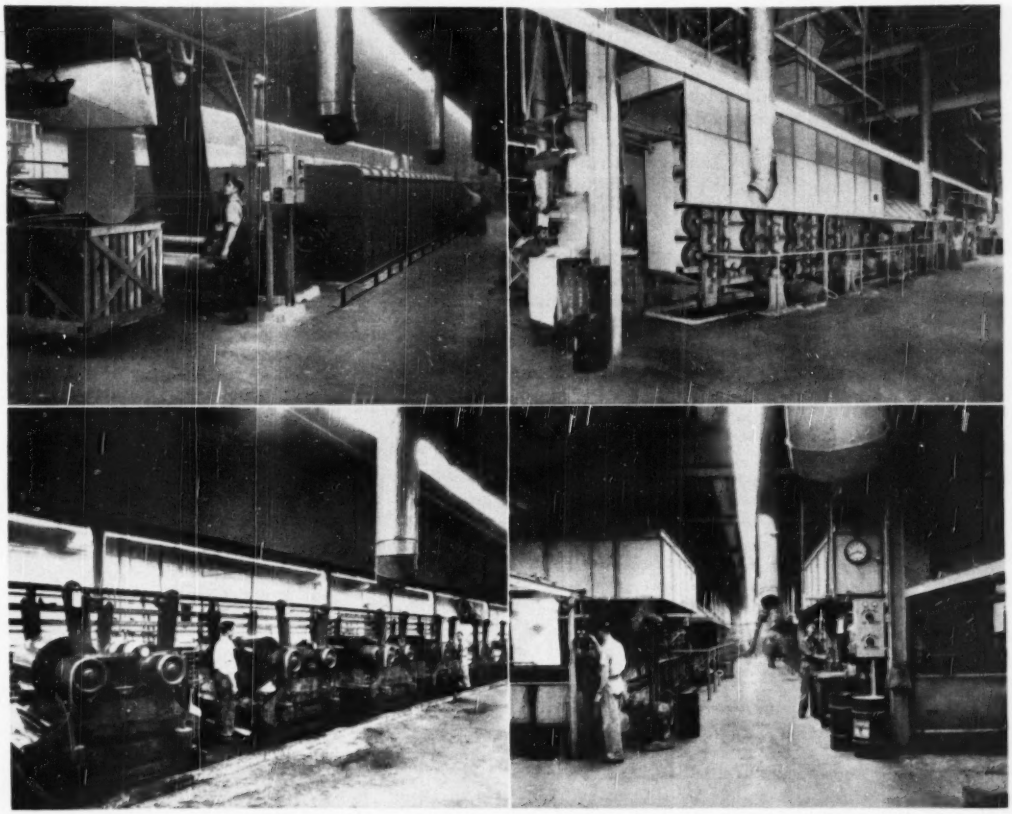
THE PHOTOGRAPHS shown here are of the modern and complete Gregg dyeing and finishing plant, a division of Graniteville (S. C.) Company. Equipment is so arranged that straightline production is the rule.

The building contains 215,743 sq ft of usable space, was built of red brick, steel, tile, and concrete. Every consideration was given to providing the best possible working conditions for the 550 men and women employed in the plant.

Elimination of condensate, complete removal of heat and fumes at the point of origin, scientific temperature control summer and winter, and modern lighting throughout were provided.

Equipment permits all kinds of dyeing and every type of finishing. A feature of the plant is its highly organized laboratory which is equipped for physical and chemical work.

Upper left, exit end of tenter frame; upper right, desizing range; lower left, battery of dye jigs; lower right, continuous dyeing ranges.



This photo of the Exhibition Hall was taken at noon on Wednesday, May 10. Note the large number in attendance.

Mill Men from Far and Near Visited the

Staff Report

THE ATLANTIC CITY SHOW, held during the week of May 8, attracted thousands of textile executives from all parts of the United States and at least 35 foreign countries. Having seen the products displayed by the more than 240 exhibitors, they were highly pleased and considered their time well spent, according to comments heard while touring the Exhibition Hall.

The accompanying story is a report to the industry describing briefly that equipment which was exhibited for the first time at Atlantic City, and which has not been previously described in the columns of this magazine.

In many instances complete details of equipment on display at the Exhibition will appear in future issues of TEXTILE INDUSTRIES. However, no attempt is made at this time to repeat descriptions already published. Photographs of much of the equipment on display appeared in the April issue.

All items are keyed. Where additional information is desired by the reader, it may be had by using the business reply card on page 194, listing the key numbers in the space provided.

Automatic Pinboard Attachment for rayon quiller eliminates hand loading. Operating two 100-spindle machines with the attachment is about 75% work load for the operator. Pinboard measures 12 x 15", holds 80 full bobbins, and weighs less than 3½ pounds. Attachment holds 6 pinboards. As each empty pinboard passes loading mechanism, 8 bobbins are loaded simultaneously until pinboard is filled and carried along a conveyor. Full bobbins are carried out on bobbin cradle from individual traveling spindle unit and deposited into a loading chute which traverse and act as continuous bobbin feeders for the pinboards. Pinboards are carried directly to weave shed.—Abbott Machine Co. (G-101).

Vacuum Type Comber Noil Conveyor. Cotton combers are now being equipped with an automatic system for picking up noils by vacuum and conveying them to a receptacle for periodic collection. Savings in labor and improved cleanliness of noils are advanatges claimed. (G-102).

Sample Yarn Dyeing Unit. A miniature of the Abington dyeing system is available which is said to give completely satisfactory results in dyeing samples and small lots. It is built with same controls and has same complete instrument panel as full-scale system. Kier will handle two Barber-Colman cheeses or three 6" x 4½" packages wound on tubes; or may be dummied off to handle one of either type package.—Abington Textile Machinery Works. (G-103).

"Sandwich Spray System" for applying oil-tint emulsions and cationic solutions at Pin Drafters and gill boxes employs an easily adjustable, stainless steel 10-step transmission to control the flow rate. It is a positive metering device with two equal discharges. An air pressure of only three pounds is required for the operation of the atomizer heads which produce a flat spray. .1 of 1% oil control is claimed.—Acumeter Products, Inc. (G-104).

Improved Unit Air Conditioner. The Model B-5 unit for complete air conditioning by the "dry" humidification system has been modified to include automatic water flushing, resulting in less maintenance. Automatic dampers have been incorporated in the unit itself, thereby saving space.—Air-Perme-Ator Mfg. Co. (G-105).

Size 1 Reduced Voltage Starter of the magnetic resistance type in-

Crowds like this were on hand from the time the doors were opened on Monday until they were closed on Friday.

American Textile Machinery Exhibition

corporating carbon pile resistors is particularly suitable for roving frames, directly driven cards, and beamers. Features: ease of adjusting carbon pile resistance values to suit particular load-torque conditions; smooth acceleration due to negative resistance characteristics of resistors; definite time limit acceleration; and compactness. (G-106).

Starter for Cards. A special panel consisting of a Bulletin 712 Size 0 combination fusible disconnect and magnetic starter with built-in Bulletin 350 Size 0 manual reversing drum has been marketed for card control. Reversing switch enclosed to avoid accidental reversal of machine while in motion. Also available without fuse disconnect. — Allen-Bradley Co. (G-107).

Automatic Dry-Type Air Filter. The "Auto-Airmat" filter for air change systems is made in vertical sections of one width and in heights from five to 15 feet. "Airmat" paper from a roll at the top of the casing is transported on a continuous screen down the face of the filter and re-rolled automatically at bottom. Lint and dust collected during time paper is exposed are rolled up with paper. Frequency with which curtain moves and distance it travels is controlled by pressure switch in the drive motor circuit.—American Air Filter Co. (G-108).

Fly Frame made by Joh. Jacob Rieter & Co. of Switzerland, has been improved with cut gears in spindle and bobbin drive, straight line cones, and an automatic full bobbin stop motion which works in conjunction with a patented reversing motion. Stop motion can be set to knock off frame either at top or bottom of lift. The machine is electrically controlled for starting, stopping, and inching. (G-109).

Ring Spinning Frame also manufactured by this firm features moving spindle rails and automatic underwinding and knock-off motion in both cotton and worsted versions of the frame. Worsted frame improved with roller bearing spindles, single apron drafting, and easy change from "S" to "Z" twist. Cotton frame has been refined with pneumatic pressure on top rollers, elimination of cap bar blocks and weight hooks, and high speed operation. (G-110).

Yarn Singeing Frame uses electricity as heat source. Temperature is regulated up to 2000 F by transformer which connects to 220 up to 500 volts a-c; power consumption is 200 watts per burner per hour. Engineered by Mettler's Sons, Switzerland, it is designed to wind both parallel and conical packages. Grooved drums prevent yarn damage during wind and can be used for hard or soft yarns. Variable speed control up to 900 ypm is featured. Dust evacuation system incorporated in frame.—American Textile Engineering, Inc. (G-111).

A New Pacific Evenness Tester. through the use of electronic recording, is said to provide a much greater magnification and much finer gauge, and can thus evaluate the uniformity of practically all yarns. No pre-conditioning is required; analyses are not affected by moisture, oil, finish, twist, bears, color, shape, etc., it is claimed. Tested material can be retested. Means for determining weight of sliver, roving, and yarn also provided.—Anderson Machine Shop, Inc. (G-112).

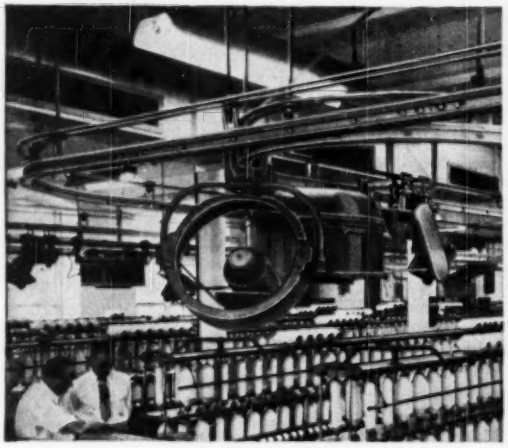
Metal Conveyor Belts for handling of textiles are now available. Typical applications: wool washers and cotton preparatory machinery.—Ashworth Bros. Inc., Metal Products Division. (G-113).

Precision Winder. A French-made precision bobbin winder for all yarns, and particularly for rayon, enables winding of cylindrical or conical packages of maximum density suitable for use with warping creels for overend winding and for all types of knitting machines. Designated the "Alliance" winder, traverse of the machine can be varied from 25 to 150 mm by simply replacing a cam. Each spindle is an independent unit. Spindle speeds from 500 to 1600 rpm.—Ateliers Roannais de Constructions Textiles. (G-114).

Flexible Tubing Coupling for

AMERICAN MONORAIL AUTOMATIC CLEANERS

CLEAN *ceilings.. frames.. monitors*



● Lint cannot accumulate on the ceiling, spinning frames or in the monitor because travelling blowers, self-propelled around a loop of MonoRail track, set up cyclonic currents of air directed down and around the machines and up and against the ceiling. Manual labor for overhead cleaning is eliminated. Other advantages are:-Lint removed before it accumulates... machines operate full time..smoother running work ...clean rooms that improve employee moral...reduction in accidents...dead air pockets broken up...fire hazards reduced.

An American MonoRail engineer will gladly explain all the advantages of American MonoRail Automatic Cleaning at your convenience.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE **CLEVELAND 7, OHIO**

vacuum card strippers is light weight and adaptable to any fitting, according to manufacturer. Can be used to connect or splice tubing. Durable construction and manufactured to specifications.—The A. & W. Machine Co. (G-115).

Automatic Cleaning for Bahnson Humiduct system's recirculated air opening is accomplished by an automatic self-doffing screen. Cleaners vary in design according to dirt load requirements. Lint or size is collected onto perforated metal screen surface of air opening. Horizontally mounted brush oscillates vertically, removing matter. Doffs into container which is periodically cleaned. (G-116).

Pneumatic Humidity and Temperature Control actuated by hygroscopic element or gas filled thermostatic bellows is said to be highly sensitive. (G-117).

Control Cabinet insuring sensitivity comes equipped with motor driven fan which draws room air through protective screen into cabinet and across actuating elements. Lint accumulation on intake screen is retarded by two neoprene tubes mounted on rotating shaft driven by motor inside cabinet. (G-118).

Air Discharge Grille composed of frame and removal core allows access to duct. Facilitates duct cleaning. Grille design offers wide spacing of blades, horizontal and vertical blade deflection, and air-foil type blades. (G-119).

Motorized Portable Psychrometer obtains quick, accurate wet and dry bulb readings. Consists of bulb thermometers, fan, fan motor, four small batteries, air velocity indicator light, and water chamber. Bracket mounted on steel tube of instrument supports convenient memorandum pad.—Bahnson Co. (G-120).

Electronic Humidity Control. For the control of spray pumps or motor operated valves in humidifying systems, this new device uses a resistance element in the bridge circuit. Changes in relative humidity unbalance the bridge; this is amplified electronically to operate a relay which in turn actuates a valve or other device to provide humidification. Features: more accurate, more stable, and more sensitive.—Barber-Colman Co., Automatic Control Division. (G-121).

Automatic Quilling from Cheeses. Production of better quality filling is an outstanding advantage claimed for the new Barber-Colman system of spooling, cleaning, and rewinding filling yarn. Filling yarn is processed on the conventional automatic spooler where it is cleaned, and cheeses are then taken to a new automatic quiller for rewinding of yarn onto quills. Empty quills are placed in a hopper at one end of machine, automatically fed, wound and delivered to a sorting table, or on pin boards, at opposite end. High production per spindle is attainable by using spindle speeds up to 15,000 rpm. Bunches are uniform as to yardage and accurately positioned on bobbin. Supply package delivery is over-end. Cheeses, cones, tubes, or spools may be used as supply packages. Operator's duties consist of patrolling for broken ends, creeling and inspection of full bobbins if necessary. Pinboard attachment is available for processing synthetic yarns. (G-122).

FOR FURTHER INFORMATION
on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Tying-In Machine for Wide Warps. The development of the Model 56L warp tying machine makes it possible in many cases to tie-in full warps in a single operation. Time and labor savings are realized through shorter tying-in time and fuller loom production. It is essentially the same in design as the Model L machine, except that it has a longer frame. Easily handled in close quarters. (G-123).

Drawing-In Machine for Plain and Dobby Weaves. A recently developed machine for drawing in rayon, cotton, worsted and most other types of yarns can accommodate up to 24 harnesses and 8 banks of drop wires and reed. Flat, steel drawing-in machine heddles are employed. Machine is equipped to draw warps from a flat sheet, split sheet, double beam, or from a one-and-one lease. Complicated drafts can be accurately drawn because the weaving elements are controlled individually by a single sheet metal pattern. Benefits: reduction in drawing-in costs, permitting not only pattern changes but also the redrawing of warps for cleanliness and maintenance of quality. Difficulty caused by excessive requirements of seasonal or unusual changes is eliminated. — Barber-Colman Co. Textile Machinery Division. (G-124).

Spinning Ring Lubrication is provided by continuous centralized driven Bijur system. Quantity of oil delivered to each ring can be predetermined according to timing device metering the pump which delivers a specific amount of oil at regular intervals. A greater efficiency in lubrication over the one-shot method is claimed. — Bijur Lubricating Corp. (G-125).

Oil Impregnated Porous Bronze Bearings. Plain cylindrical, flanged, and thrust bearings, cored and solid bars, and plate stock made from oil impregnated porous bronze are available from stock. 25% of oil by volume is contained in the bronze which is designated "Bost-Bronz." When relubricated, oil is absorbed by capillary attraction. Oil cushion increases shock load capacity.—Boston Gear Works. (G-126).

Swiss-Made Dye Jig featuring automatic reversing and stopping device with self-acting passage counter is capable of increasing dyehouse production, according to manufacturer. One man can operate up to six machines depending on the type of cloth and dyeing process employed. Compact streamlined construction adapts it to confined areas. An oscillating balance expanding device provides protection for delicate fabrics by eliminating friction at roll and cloth contact, thereby insuring a creaseless run.

Stainless steel hood reduces steam consumption, prevents oxidation of cloth selvage, and eliminates atmospheric fogging. An oscillating squeezer can be used to intensify the chemical reaction after processing. Also used to shorten time required for de-sizing, soaping, rinsing, boiling-off, or dyeing. Both rolls are motor driven simultaneously, thus maintaining slight but constant longitudinal cloth tension. Made in 51¼, 63, and 75-in. widths normally.—H. W. Butterworth & Sons Co. (G-127).

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Conveyor Systems

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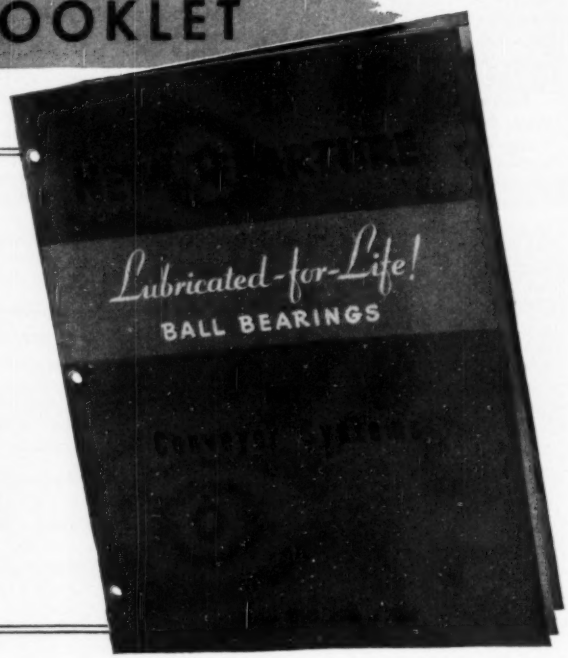

MORE THAN any other single invention perhaps, the mechanized conveyor system lifts the load off man's back and puts it on the machine.

It is a typically American invention, and it represents a typically American way of getting things done.

By originating and developing ball bearings which are lubricated-for-life and are sealed to keep dirt out, New Departure made a contribution of major importance to the modern conveyor system.

Proved in installations operating under rugged conditions, in temperatures from below zero to desert heat, and exposed to dust and dirt . . . carriers developed around these lubricated-for-life conveyor bearings are giving years of service without any cost for greasing.

The story of New Departure Conveyor Bearings and the services that go with them is told in a new booklet, illustrated above.

If you design or manufacture or use conveyor systems, you will find it interesting and helpful reading. Mailed promptly, to requests on business letterheads.

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NEW DEPARTURE
BALL BEARINGS

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NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONNECTICUT

Infra-Red Drying Unit affords precision control of working temperatures within a 150 to 500 F range, it is claimed. Uniformity in color on both sides of fabric is insured, according to the manufacturer. The Una-Ray has been used for nylon setting, and is available in various sizes to suit tenter frames, loop dryers with heat recirculation, and slashers. — Carbomatic Corp. (G-128).

Lint Proof Motor with cast iron frames and end brackets for general purpose use is designed with large smooth air passages to permit free flow of cooling air. Motors are factory lubricated, but bearing housing construction permits easy relubrication when unusual service demands. Terminal boxes and mounting feet are cast integral with frame.—Century Electric Co. (G-129).

Spindle Driven Beam Warper handles section beams with 36-inch diameter heads 54¼ inches between heads, or wider, at high speeds with minimum of vibration, manufacturer claims. Model SD-49 is powered by 7½ hp d-c motor with generator and can gradually accelerate between crawl and operating speeds. Hand operated rheostat on side of frame permits speed control. Linear rate of beaming is constant regardless of beam diameter. Main driving shaft, presser roll, and cross over roll are equipped with Warner electric magnetic brakes which can be synchronized and set for any stoppage. Press roll is large diameter. Adjustable air pressure on press roll is provided. Beam is driven from both ends and driving heads are equipped with self centering chucks and driving dogs. Machine features speed indicator, pre-determining counter clock, collecting eyeboard on back, positive zig-zag expansion on front. (G-130).

Creel Stop Motion for vertical type magazine cone creel, developed by Deering-Milliken Research Trust, employs electronic principle. Device is electrical eyeboard type which is placed at the apex of creel. All drop wires are assembled on panels with each wire fitted with porcelain eyes. When thread passing through wire breaks, the wire falls and makes contact thereby activating warper brakes.—Cocker Machine & Foundry Co. (G-131).

C-4 Automatic Loom with V-belt motor drive, incorporates double-plate friction type clutch. Vibration-proof oil pipe fittings are installed on each shock-absorbing crank connector. Crank and bottom shafts are roller bearing mounted. Clamp-type sweep arms and installation of picker stick studways at each end of loom improve picking motion. Shuttle ejectors at loom ends may be operated by foot motion. Filling stop motion has long shaft, spring and collar for sensitivity. Lay features easy reed adjustment. Pressure strips and guide wires installed on magazine reduce sloughing-off. Tri-color attachment permits automatic bobbin changing production of upholstery type fabrics. Pendulum lever weight, chrome plated whip roll, and needle bearing pinion shaft are incorporated in automatic let-off. Warp stop motion is equipped with indicator light. (G-132).

S-4 Loom is a 4x1 shuttle changer with two cells of magazine replenishing the most used shuttles automatically while other two shuttles are changed manually as indicated by a feeler. Essentially it incorporates all other features of latest S-6 loom described below. (G-133).

S-6 2x1 Call Box Loom equipped with double plate type clutch in the drive, permits finger control of shipper handle. Filling stop motion is No. 8 center stop improved with auxiliary spring and collar on feeler wire shaft for positive operation. An improvement in plain end of loom allows freedom for picker when shuttle is discharged from box. Comes equipped with new type vacuum thread holder and filling end remover. A two-prong electric feeler operates in conjunction with selective feeler mechanism. Controlled uniform tension on the warp is maintained by an electronic type let-off. Tension is controlled by an adjustable measuring device attached to a selected number of ends which is connected to a motor driving assembly attached to the loom beam. The beam is driven forward at a rate of speed necessary to maintain desired tension whether shed is open or closed, or whether beam is full or empty. If tension increases or decreases beyond set limits, stop motion is activated. Driving mechanism consists of fractional hp motor with V-belt driven gear reduction unit, further stepped down through spur gears and chain sprocket drive connection to the warp beam. (G-134).

Needle Loom weaves narrow fabric with filling drawn from large supply cone. Rotary reed keeps groups of warp ends in the correct reed dent. Resulting fabric has two picks in each shed. Alternate filling loops at each edge are knitted together to form selvage. Two webs can be woven on same head. With two webs, 1700 sheds per minute may be obtained. Single pick equivalent is 2125. Push button control, warp stop motion, and filling thread stop motion are featured. Tapes may be varied from 7/16" to 1¼". Machine is mobile. (G-135).

Multiple Shuttle Narrow Fabric Loom is designed to be built in varying lengths and spacings, with varying type shuttle lays, let-off motions, harness motions, and take-off motions to suit requirements. Slotted lengthwise members facilitate changing location of cross girts and arch braces. Sheave stands in arches are also adjustable. Most parts are machined. Generally equipped with anti-friction bearings, the loom is favorable to high speeds. Lay beam and reed rails are magnesium. A stop and start motor is used with a "Timing Belt" direct from motor pulley to crank shaft pulley. Electrical braking is featured. Speed range is adjustable from 120 to 275 picks per minute by changing motor pulley. An improved cam harness motion for positive up and down movement of harness frames is offered. (G-136).

W-3 Loom features sturdier cross and lengthwise girt construction, eliminating girt feet and permitting improved support for crankshaft inboard bearings. Sectional gears in head motion reduce filling kinks. Removal of crank shaft and bottom shaft are facilitated by three-piece design. All shafts are completely roller bearing. New picking motion with picking shaft mounted on roller bearings at each end, and two-piece picking sweep arms are provided. 28-lb aluminum layends and roller bearing supported rocker shafts are

FOR FURTHER INFORMATION on equipment described here, fill in the Business Reply Card on page 134, listing the key numbers of those items in which you are interested, and mail card at once.

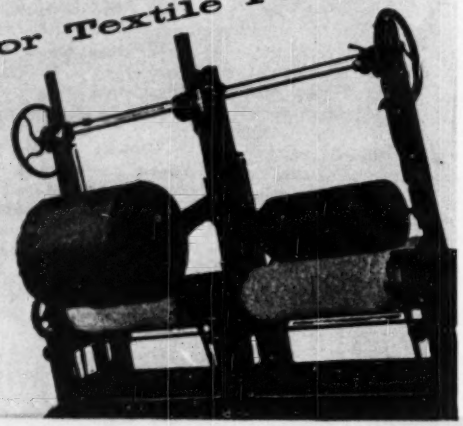
Yesterday

Textile World, 1900

BLEACHING, PRINTING, DYEING and FINISHING

MACHINERY,

For Textile Fabrics



Saturday Evening Post
February 22, 1823

J. BUTTERWORTH's wholesale and retail manufactory of Tin and Sheet Iron Ware, and all kinds of Tin Work for Machinery, under the Shoe store corner of Market and Third street, south side, and at No. 355 North Third street.

N. B. On hand, a quantity of American and English Combplate and Cleaners, of an excellent quality. jan 4—6m

Commercial Bulletin, Boston
April 22, 1865

DRYING MACHINES

For Print Works, Bleacheries, &c.

Also for drying warps and finishing Cotton Cloths, as Tickings, Denims, Stripes, &c. The undersigned is prepared to furnish Drying Machines for the above branches of business. Our Cylinders are made of TINNED IRON, which is recommended as equal to Copper for Drying and at one-half the cost, and superior to it for finishing White, Straw and other colored goods. We have machines in operation at the Waltham Bleachery, Mass.; Norwich Bleachery, Norwich, Conn.; Victory Manuf'g Co., Saratoga, N. Y. Two at Thorndike Company, Thorndike, Mass., for Warps and Tickings, and over 100 in Philadelphia and its vicinity. Also Factory Cans made of One Sheet of TINNED IRON, with Wrought Iron Rings, and Stamped Bottoms. H. W. BUTTERWORTH,

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Today and Tomorrow

Your great-grandfather may have seen Butterworth's advertisement in the Saturday Evening Post in 1823 . . .

Your grandfather may have read Butterworth's advertisement in the Boston Commercial Bulletin the same week that Abraham Lincoln was assassinated in 1865 . . .

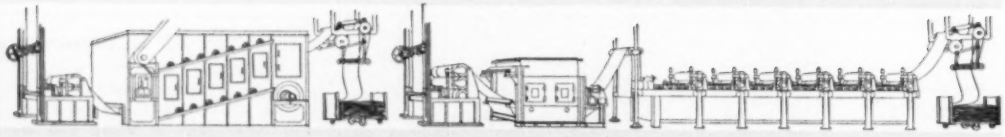
Your father may have noted the full-page Butterworth advertisement in Textile World in 1900 . . .

In the wet end of textile finishing, the Butterworth tradition began in 1820. For 130 years, Butterworth Machines and Butterworth Service have meant more production and lower costs for America's leading textile finishing plants.

H. W. BUTTERWORTH & SONS CO.

Philadelphia 25, Pa. — 40 Fountain Street, Providence, R. I.
1211 Johnston Building, Charlotte, N. C.
In Canada: W. J. Westaway Co., Hamilton, Ontario

BUTTERWORTH



featured in the lay. Magazine employs positively driven geared thread holders which adjust to the amount of yarn passing between them, being actuated each time bobbin is transferred. An automatic chain driven let-off, with chrome plated back and auxiliary back rolls, is said to be the most efficient yet developed. Let-off housing is mounted above loomside and back roll, allowing the back roll to constantly return to its normal position directly below its support. (G-137).

C-5 Automatic Bobbin Changing Dobby Loom features many of the improvements of the C-4 loom described previously. A swing reed motion which may be used either as a swing reed or in firmly fixed position is carried on needle bearings, and is adjustable. A No. 35 electro-mechanical type feeler allowing use of conventional bobbins without a metal ferrule is incorporated. A new type vacuum filling control utilizes rotary pump, thread accumulator, cam-operated filling end holder, box-front type scissor cutter, valved filling end remover at the box mouth, and an arrangement for controlling of ends from outgoing and incoming bobbins. Let-off motion includes 3-J type of weighting arrangement. —Crompton & Knowles Loom Works. (G-138).

Automatic Seam Protector on Type CMR Shear is regulated by pneumatic timer. The highly sensitive detector works positively on all seams including flat butted for full widths. When seam is detected, individual motors reverse and revolvers run in opposite direction until seam passes cutting parts. Speed of cloth is adjustable through regulation of timer. Lessening of the untrimmed portion of the cloth is claimed for this machine. (G-139).

Rayon Inspector, Type S2A Unispeed, is developed for constant cloth speed with a center wind. Power is applied to the arbor in the center of the goods. Machine features adjustable speed drive, constant cloth speed at varying rates, self-supported arbor, and a forward and reverse motion controlled by hand lever. Rolls up to 24" in diameter can be accommodated.—Curtis & Marble Machine Co. (G-140).

A Package Type A-C Magnetic Motor Starter for squirrel cage motors across-the-line type features dynamic braking for quick stopping. A rectifier tube produces d-c current for dynamic braking. Recommended for general applications wherever quick stopping is required—for example, knitting machines. Necessity for plug stopping or mechanical braking eliminated. (G-141).

FOR FURTHER INFORMATION on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Starter for Roving and Spinning Frames. Fewer broken ends on starting, less time for piecing and doffing, and more accurate overload protection are benefits to be derived from a new starter for roving and spinning frames. Motor is started at slow speed by means of resistor in motor circuit. After short interval of time, when machine is under way, resistor is cut out to apply full voltage to motor. Time relay is adjustable. (G-142).

Loom Switch on Steel Pedestal. A recently developed loom motor starter has a small steel case and cover with a steel mounting pedestal to make a complete assembly that is resistant to mechanical shock and also lintproof. Contacts in open for quick inspection and easy renewal on the job. Overload protection provided. For motors up to 2 hp, 220 to 660 volts.—Cutler-Hammer Inc. (G-143).

72 x 60 Wool Card Set is synchronously driven and operated as a unit from central control panel. Arrangement results in coordinated stock delivery from 1st to 2nd breaker section. Intermediate broad band feed has been refined with a variable speed drive, adjustable by hand while card is in motion, for extremely fine overlapping regulation. Conventional lap compressor rolls are replaced by lattice compression aprons which allow for uniform delivery to cylinder.

Main cylinder and doffer bearings, oil impregnated porous bronze bearings elsewhere make card virtually lubrication free. Lint and grease removal is facilitated by trim exterior and enclosed moving parts. Model L card is equipped with Model L 1 tape condenser delivering 144 good ends, 4 waste ends. Condenser improved with new type apron drive, streamlined enclosures, and long wearing plastic tapes. Tapes are seamless weld, eliminating any interference from connections. (G-144).

Large Package Wool Spinning Frame, Model F, is now equipped with fluid drive and anti-friction type spindles—Davis & Furber Machine Co. (G-145).

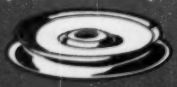
Automatic Spinning Frame Builder Motion. Advantages claimed for the new No. 1 spinning frame builder motion are as follows: (1) builds a perfect feeler bunch of desired yardage and width, (2) position of service package with respect to feeler bunch can be controlled exactly, (3) uniform bobbins with uniform yardage are made—height of yarn is exactly controlled and doffers cannot "short doff," (4) tip bunch can be of varying sizes or eliminated entirely, (5) rail automatically locks in doffing position and frame is stopped—in that position bobbins are ready to be doffed without slackening ends, (6) when starting up frame, motion resets itself automatically, eliminating necessity for winding the rack. Can be applied to most frames already installed in mill. (G-146).

Loom Improvements. A new **clock spring top motion** almost completely eliminates spring breakage, according to the manufacturer, and provides a smoother and more efficient action for the harness frames. (G-147).

A new **constant tension let-off** will improve cloth quality, it is claimed, because the beam follower and other binding points on the conventional let-off are eliminated. This clock spring let-off provides constant tension throughout one beam or many beams. It is friction free. (G-148).

A simple and sturdy **center fork mechanism** recently developed will assure rayon quality in cotton cloth, it is said. (G-149).

A new **loom drive,** known as the Draper-Diehl Power Transmitter, is a complete power package in itself —high inertia motor, clutch, and brake. Its simplified construction reduces the number of parts and provides interchangeability of entire package in case of failure. Power saving is reported to be substantial;



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Yes — you can now Chrome Plate your products with "Diamond-Hard", the super-smooth, rust, friction and wear resisting finish—the complete facilities of our Philadelphia, Pa. and Greenville, S. C. plants are at your service.

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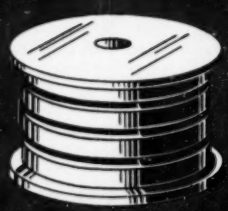
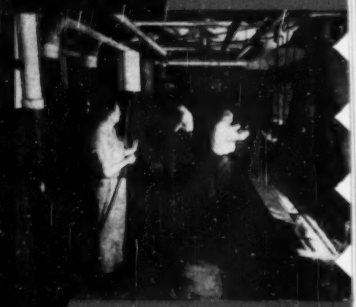
For underground machine parts — refinishing worn bearing surfaces — flash chrome for molds, and thousands of commercial uses, specially prepared . . . specially plated . . . specially finished Ste-Hed-Co "Diamond-Hard" Chrome Plating can't be equalled for performance.

For information on Ste-Hed-Co Plating services such as nickel, cadmium and copper plating — write plant nearest to you — Philadelphia 32, Pa., 2100 W. Allegheny Ave.; Greenville, S. C., 621 E. McBee Ave.





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STEEL HEDDLE COMPANY OF CANADA, LIMITED
6259 Notre Dame Street East Montreal, Canada

positive braking action eliminates lost linkage motion. (G-150).

An **aluminum lay and handrail** increases shuttle life, according to the manufacturer. — Draper Corp. (G-151).

All Purpose Fastener designed to replace tapered, grooved, straight, and dowel pins is called "Rollpin." It (1) is easy to install, (2) compresses as driven, (3) locks permanently in place, and (4) is easy to deliberately remove.—Elastic Stop Nut Corporation of America. (G-152).

Magnetic Separators are now provided with covers to prevent accumulation of tramp iron around the castings and the resultant shorting out of lines of force; also prevents damage to magnets from shock or breakage. Top operating efficiency is thereby assured.—Eriez Mfg. Co. (G-153).

Seamless Coiler Can, 15 x 36", designed to fit all machines with 15" turntables, is particularly suited for Warner & Swasey Pin Drafters. Made from hard vulcanized fiber, can is light, strong, smooth, and rivetless.—Fibre Specialty Mfg. Co. (G-154).

Disc Chart Recorder is available for measuring d-c current and voltage from 0-50 microamps full scale to 10 amps full scale, and 0-15 millivolts to 0-1000 volts full scale. Motor provides actuating power for pen arm and auxiliary control switches. (G-155).

Proximity Switch requiring 110-volt a-c supply comes equipped with RF coaxial cable which may be terminated in any manner by user. The Tektor is sensitive to minute changes of capacitance of the electrode on end of cable. It incorporates an electro-magnetic relay for switching operations. Device detects presence of any solid, liquid, metallic, or insulating substance approaching a predetermined distance from the electrode. Can be used as liquid level alarm or control system, and as a temperature alarm or control. (G-156).

Moisture Content in fabrics and warps of any fiber can be continuously indicated by Model ADR Drimeter, employing same basic circuit as Model B2 heretofore available. Large meter gives good visibility at considerable distance. Hinged case panel permits accessibility to all parts. The new model features simplified operation and one calibrated dial which is the only control adjusted by the operator. (G-157).

Electronic Hygrometer, type RH-1, gives direct and accurate visual indication of percentage relative humidity at any normal atmospheric temperature. Available as an indicator controller when used in conjunction with Fielden Microtol sensitive relay and as an indicator recorder when used in conjunction with Fielden Servograph recorder, the device has an accuracy of plus or minus 1%.—Fielden Electronics, Inc. (G-158).

Improved Heavy Duty Extractor. The Fletcher "Twintainer" extractor has been equipped with a stainless steel safety cover with automatic opening and closing. Cover opens and closes by air pressure. Adjustable coil spring provides counterbalance.—Fletcher Works. (G-159).

Bobbins for Twisting Synthetic Yarns, known as Gyrotex bobbins, assure dynamic balance, complete freedom from distortion by heat and moisture, strength to withstand winding strains, light weight and flawless contact surfaces, according to the manufacturer. Heads available in 50 different colors for rapid identification. — The Formica Co. (G-160).

Heavy Duty Precise Wind Machine. This newly developed 10" traverse machine, Model 78, for producing tubes or cones of tire cord or coarse cotton, wool, jute, and paper yarns, will wind packages weighing as much as 28 pounds each. Five spindles individually motor driven. New expansion type tube and cone holders permit quick doffing and donning; handle control.—Foster Machine Co. (G-161).

Semi-Decating Machine, designated the "Versamatic," is equipped with hydraulic drive. 10 to 1 speed variation is obtainable. Automatic compensating tension control for the apron is provided. To produce varying package densities for different finishes a hydraulically operated roll is built into the machine. Other features: apron automatically guided; automatic steam throttling and pumping controls; steam is not timed until it breaks through package, resulting in better quality decating and uniformity.—David Gessner Co. (G-162).

Votator Warp Size Apparatus is now featuring split jackets. Developed for the small mill, first half of jacket contains steam at 235 F; second half is for water at 210 F. Cooker-cooler arrangement of jackets cuts space requirements.—Votator Division, The Girdler Corp. (G-163).

Mobile Sweeper combines vacuum lint removal with simultaneous forced air draft under-machine cleaning. A damper regulates air volume, while air draft direction is changed by lever control. Powered by nine 1½ volt batteries, the sweeper contains a cloth filter and is mounted on 5-inch rubber-tired, ball-bearing wheels. Multiple blade fan produces 500 cu. ft. of air per minute. Machine weighs 200 pounds and can clean area containing 240 frames in one hour with one operator, states the manufacturer.—Harney Textiles Inc. (G-164).

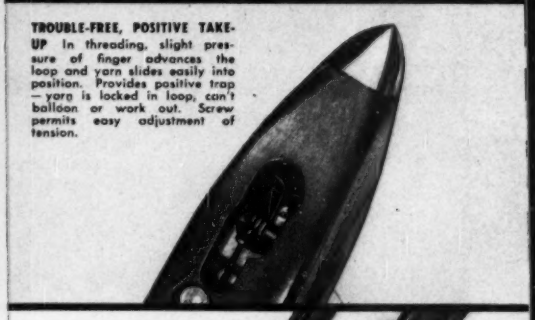
FOR FURTHER INFORMATION on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Portable Moisture Meter has been modified for determining regain of rayon cakes. Measurement is made through wrapper with ± 1% precision in the percentage range required. Components are electrode fastened to flexible cord leading from instrument. — Hart-Moisture-Meters. (G-165).

Bramwell Card Feeder features self-regulating variable speed spike apron drive controlled by automatic feeler rack in large capacity hopper. Apron speed is varied to permit constant rate of delivery during run. Slope of lifting apron increased for good pick-up at slower speeds. Weighing mechanism on this Type G feeder is ball bearing equipped and protected by transparent covers. Control switch in balancing assem-

HAND THREADING through the guide slit ends need for weaver's hook — is so simple the greenest hand can thread it 2 to 3 times faster than conventional shuttle. Time saved reduces worker fatigue, means more looms per battery hand.

THREE TENSION HOOKUPS The pad or drag tension is easily adjusted for any type yarn, of any degree of elasticity. The pad tension alone can be used, with the yarn by-passing the take-up tension (1). The take-up tension alone can be used, with pad tension released (2). Or, a combination of both pad and take-up tensions can be used (3).



TROUBLE-FREE, POSITIVE TAKE-UP In threading, slight pressure of finger advances the loop and yarn slides easily into position. Provides positive trap — yarn is locked in loop, can't balloon or work out. Screw permits easy adjustment of tension.

NEW, STRONGER ONE-PIECE BOX Flange-type, it permits a closed bottom design. Box is stronger, withstands constant vibration without breakage. Spindle can be quickly leveled with adjusting screw. Box can be dimensioned to take any type of quill. Patented double-shouldered steel bolt can't work out through front or back wall. Avoids danger of reed spoilage or smashes from break outs.

Here's a new pacemaker for production from C&K Shuttle-changing Looms that will set entirely new records of speed and efficiency.

Hand threaded in a flash, it eliminates the need for the weaver's hook. Skilled hands can cut threading time to one-third, thus looms per battery hand can be considerably increased.

Offering a choice of 3 tension hook-ups in one shuttle, its versatility is unrivaled. With one type shuttle you can handle yarn of any degree of elasticity, meet an endless variety of weaving specifications. Accordingly, your shuttle inventory can be materially reduced. *No other shuttle* provides *both* pad tension and take-up controls.

Check over the many exclusive features of the U S Gosselin Tension Shuttle listed here. Then ask your U S representative for a demonstration. You'll agree it's the "all-purpose" shuttle you've always wanted . . . a time-saving, trouble-free, production-boosting pacemaker that will win enthusiastic approval from battery hands and front office alike.

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bly produces instant electric closure of automatic catch pan. Scale pan is aluminum with drop doors diagonally suspended for precision weighing without hill-and-valley delivery. Oil-impregnated bronze, ball, or needle bearings throughout.—Geo. S. Harwood & Son. (G-166).

Light Metal Carpet Type Loom Beam. Weighing only 141 pounds, a new aluminum loom beam with 100-inch traverse is fitted with 30-inch diameter heads. Slots provided for fastening warp ends to beam. (G-167).

Adjustable Head Loom Beam for rayon, made of aluminum, has 26-inch diameter heads and weighs only 112 pounds.—Hayes Industries, Inc. (G-168).

Sheet and Pillow Case Wrapper. Automatic wrapping machine will make 25 packages per minutes from 17 to 24 inches in length, using paper, cellophane, Pliofilm, etc. Electric eye centers design on each package. Features: saves labor; low maintenance; makes uniform neat package. Attachments available for feeding cardboard for backing; also for printing and sealing thermoplastic label to package.—Hayssen Mfg. Co. (G-169).

Super High-Draft System. H & B Casablancas, is three-roll with set of double aprons. Cap bars, roller stands, weighting, cradles, and tensors are newly designed. The system will handle up to 2″ staple and offers great flexibility of drafting ranges, better control of apron travel and adjustment, producing even, strong yarn, according to manufacturer. (G-170).

Four-Roll High Draft System. H & B Casablancas, has double apron arrangement between front and second lines, and a condenser directly in back of double aprons. This arrangement permits three distinct drafting zones making drafts as high as 80 possible with certain fiber lengths. Fine and coarse count yarns can be spun. Equipped with flexible type saddles and improved spring weighting. (G-171).

Three-Roll System. H & B Casablancas S-3, allows spinning of all fibers from 1″ to 3″ staple. Spinning frame may be converted to spin long staple from short staple in a few minutes without changing cradles, belts, or roll settings. Offering a drafting range from 14″ to 40″, the frame assures complete fiber control regardless of staple length, it is said. Features spring weighting, new type saddle, and a cradle design with interchangeable platforms for different staple lengths. (G-172).

Anti-Friction Spindle of strong, simple construction features two standard ball bearings, all steel base, grease packing, and plumbing which permits adjustment during operation. Manufacturer states spindle will increase tape life, lower power consumption, promote even twist, and run smoothly at high speeds.—H & B American Machine Co. (G-173).

Measuring and Inspecting Machine for fabrics, featuring tensionless, constant speed operation, is designated Model M1W. Automatically controlled drive compensates for change in relative diameters of let-off and take-up rolls. Constant speed is maintained at examining board.

FOR FURTHER INFORMATION
on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Controls and driving elements are placed within removable covers. Manual controls are located for operator convenience in standing or sitting position. Speed is adjustable and driven let-off permits reverse wind.—Hermas Machine Co. (G-174).

Slasher with Moist Air Drying. Uniform winding tension up to 80 ypm is the claim made for the Hibbert Model A12 sizing and moist air drying machine. Suitable for cotton, wool, worsted, rayon cut staple, jute and linen warps, the most outstanding features of the machine are: (1) high production, (2) low operating cost, (3) uniform winding tension throughout beam, (4) complete operational control, (5) all electric driving, (6) thermostatic control of size box and drying chamber temperatures, (7) automatic speed control governed by moisture content of warp, and (8) automatic cooling of drying chamber.—Joseph Hibbert & Co. Ltd. (Atkinson, Haserick & Co., U. S. sales agents). (G-175).

Small Capacity Blower capable of 0-140 cfm from 1 to 4 psi is constructed in sections made from precision castings which eliminate machining requirements and bring down its cost. Inside and outside surfaces are aerodynamically clean. Supplied with V-belt or direct drive. —U. S. Hoffman Machine Co. (G-176).

High Speed, Full Intersecting Gill Reducer, recently developed, is especially designed for the abbreviated system of producing worsted yarns, reducing operations between combing and spinning. There is one head of screws and fallers and double coiler heads. Other features: anti - friction bearings throughout; electrically operated stop motions; head is easily accessible; new weighting mechanism simply constructed; fallers of double slotted, standard type.—Holdsworth Gill Screw Co. (Atkinson, Haserick & Co., sales agents). (G-177).

Tow Stapler directly converts filament into sliver of controlled staple length with variation in staple length to insure spinnability. Machine breaks up tow cohesion, allowing maximum random distribution of individual fibers. The Perlok stapler eliminates some reducing steps by delivering a light sliver. Adjustments can be made to alter staple length or crimp, or handle different synthetic fibers.—R. H. Hood Co. (G-178).

New Wool Oil. Sulfol 448 is the name of a recently developed non-ionic wool oil that is said to be resistant to hard water, have anti-static properties, easily scourable, and neutral. It is also applicable to nylon and wool blends. (G-179).

A New Wetting Agent. Cerfak 453, also has detergent properties. It is an excellent rewetter, according to the manufacturer, and is recommended for use on goods prior to compressive shrinking operations. (G-180).

Formula for Sizing Spun Rayon. Advantages of a new formula for sizing spun rayon were listed by the textile chemical manufacturer as follows: greater tensile strength, more size added, less shedding, and better weaving.—E. F. Houghton & Co. (G-181).

Announcing the *New* VERSATILE MULTI-PURPOSE

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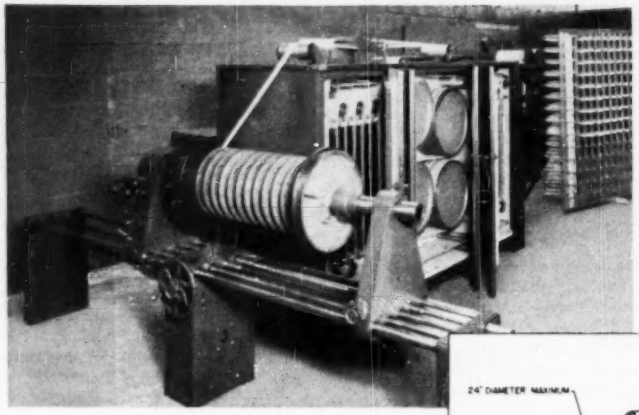

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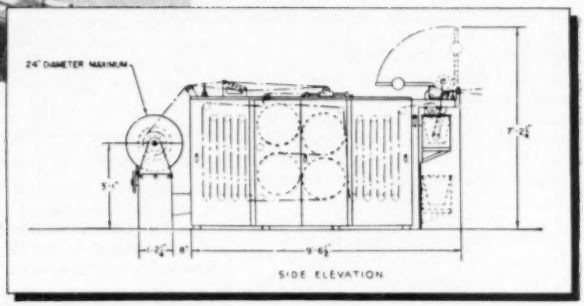

Produces

SHORT-RUN STYLES,
NEW STYLE SAMPLES,
TEST and RESEARCH MATERIAL

with a minimum of yarn, little time, trouble, or expense

The Callaway Slasher is specially designed so that short runs of sample and test warps of cotton, synthetics, silk, wool or worsted can be treated at low cost and with little effort.

Using a minimum amount of yarn from individual packages, this versatile slasher will deliver a sized warp of any possible number of ends.

For test and research work, one or more size treatments and three different drying methods — hot air, cylinder contact and infra-red — can be applied to sections of the same warp at the same time. Weaving tests of various warp treatments can be made on the same loom simultaneously.

In addition to its many uses in research work the Callaway Slasher can be of great value in small or large mills for slashing short-run styles, for making up new style samples or for evaluation of weaving quality.

The Callaway Slasher, operated entirely on electricity, is a complete and efficient slashing unit with essential controls and adjustments for all phases of operation. It will reduce the cost of sample runs and speed research work.

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Tuffer Tension Regulator for drawing clothing on woolen or cotton cards may be set for any tension required. Tension is indicated by numbered dial and held constant by an adjustable plate. Device weighs 62 lbs, can be operated by motor drive or hand winch, and comes equipped with reversing switch and foot switch. With this equipment, woolen cards may be clothed without separating the sections, according to the manufacturer. —Howard Bros. Mfg. Co. (G-182).

Aluminum Section Beam with removable, welded type 36-inch diameter heads is now available for high speed, uniform warping of fine denier synthetic yarns. Beam is dynamically balanced and has polished finish.—Hubbard Spool Co. (G-183).

Self-Contained Conditioning Cabinets, complete with humidity, heating, and refrigeration for absolute control of temperature, are now on the market. Highly saturated and tempered humid air is blown from either side of cabinet at alternating periods of 30 seconds, thus giving all materials an even regain. Danger of oversaturation is eliminated. Timers for regulating conditioning periods can be supplied.—Humidaire, Inc. (G-184).

Electric Loom Drive. Elimination of conventional protection (rods and daggers), no mechanical shipping motion parts, no clutch slippage, only two buttons (start and inch, and stop), and positioned stops (shed is wide open on side filling stops; harnesses level on warp stops) are outstanding features of the Hunt-Warner electric drive which is available as a package unit for Model E looms or as a component of new Hunt HR 50 and HC 50 looms. Entire control mechanism, as well as clutch and brake, operate from 12-volt d-c power source. Clutch and brake are composed of three elements—(1) clutch magnet mounted on free running motor gear, (2) armature disc on hub of crankshaft gear, and (3) brake magnet centered on same crankshaft gear hub and held from turning by a torque arm resting on frame of loom motor support. Clutching and braking pressure is obtained by attraction of magnetic armature to two-pole circular magnet which is faced with molded friction material and requires no attention, according to the manufacturer. Cam timer makes possible positioned stops.—Hunt Machine Works, Inc. (G-185).

Air Operated Squeezer on open width washer provides roll pressure by means of a diaphragm type, air operated cylinder. Cylinder is mounted directly under squeeze rolls, occupying less space than conventional lever arm types. Direct acting "pancake" diaphragm pressure cell allows bottom roll to be movable, thus insuring separation of the rolls by gravity when air pressure is off. The new design assures uniform pressure, has no moving parts requiring lubrication, and allows the building of multiple cell units for any required pressure.—Rodney Hunt Machine Co. (G-187).

Sample Dye Kettle with Adjustable Reel. This machine, of all stainless steel construction, is equipped with the Hunter herringbone reel which can be adjusted in height from 0 to 36". Capacity up to one full cut of cloth (60 yards). (G-188).

Open Width Compartment Washer. For desizing, oxidizing, soaping, and washing of cottons and synthetics, a new open width compartment washer features rugged construction, accessibility, and easy maintenance, versatility, and speed. Can be built with any number of compartments, with a heavy set of squeeze rolls, and a compensating gate at delivery end. Bowls are identical, each having an expander roll and small set of squeeze rolls mounted at delivery end of bowl. Final bowl does not have squeeze rolls but delivers goods over an expander roll and directly into heavy squeeze rolls. (G-189).

High Speed Tensionless Washer. Cloth is conveyed through the Flex Reel washer by means of multiple reels assembled on a single shaft. Each reel acts as an individual variable speed drive which automatically adjusts to the amount of tension or slack that may occur in the preceding loop. Constructed of stainless steel with squeeze rolls mounted at entering and delivery end. Rope and open width types available. Use of packing glands is eliminated since it is not necessary to drive bottom rolls. Maintenance is negligible; speeds up to 500 ypm; direction of cloth travel can be reversed.—James Hunter Machine Co. (G-190).

Fluid Drive for Cards. A new individual drive for cards and roving frames utilizes a hydraulic transmission known as the Booth "Hydra-Vor" which develops and derives its power from fluid energized and activated under centrifugal force in vortex. Advantages claimed: motors last longer because they start unloaded; space is saved since Hydra-Vor operates in a removed position from motor; motor and other power vibration is not transmitted to card since supporting bracket of drive and motor is not supported by driven machine; increased production; improved product; reduced maintenance; easily installed.—The Hydra-Vor Co. (G-191).

Nylon Hosiery Conditioner. 15 denier monofilament full-fashioned nylon stockings are taken to the fully automatic "H-W" conditioner immediately after knitting, before looping and seaming; conditioned for 35 minutes at a temperature of 200 F with a wet bulb reading of 184 F. At end of period, humidity is automatically cut off, dampers opened, and stockings dried for a 15 minute period at 200 F; unit shuts off automatically. Time required, 50 minutes. Advantages: reduction of fish-eyes and snagging; seaming and looping more easily done, resulting in increased production.—The Industrial Dryer Corp. (G-192).

Stainless Steel Finish, called Industrial's 100 Grit, is produced on sheets in gauges ranging from 8 to 22. A lustrous, ground finish for mill sizes up to 156 in. long, it is offered to the trade at the same price per pound as No. 1 and No. 2-B finishes in gauge thicknesses from 8 to 17. Gauges from 18 to 22 are priced slightly higher.—Industrial Steels, Inc. (G-193).

Fiberglas Reinforced Tape makes possible the reduction of costs and improvement of efficiency in heavy packaging, shipping and storing operations. Fine spun glass threads

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are sealed to tough kraft paper backing with adhesive coating, resulting in a pressure-sensitive tape that is extra strong, flexible, and easy to use. It is particularly suited for banding of fiberboard or corrugated cartons. (G-194).

Pressure-Sensitive Tapes for Textile use. Permacel-C 711 is a stain resistant crepe-paper tape primarily used for holding last lap on roll of cloth. Permacel-C 771 crepe paper tape is used as slasher tape where gray adhesive gives desired contrast. Permacel-C 721 stain-resistant flat-back paper tape is primarily used as slasher tape. Permacel-C 021 double face paper tape is used for adhering opossum fur to shuttle coverings to Simpson shells, etc.—Industrial Tape Corp. (G-195).

Yarn Conditioning on Winder can be accomplished with Surco 5 System, consisting of conditioning liquid tank, control unit, and conditioning applicators. Eliminating trough conditioning, this method features automatic stop-motion for thread break or full package, and electronic controls which permit operating winder with or without conditioning. Presently adaptable to Foster 102 and Universal winders. (G-196).

High-Twist Rayon Yarn Conditioning is accomplished by spraying quills with Hygrolit grade KST-N fluid under controlled conditions, passing the yarn to steamer and looms on a time schedule. Method is applicable to viscose, acetate, and Bemberg yarns. Quills are assembled on pinboards and then passed through conditioning machine Model 5AY-N Extra on a traveling apron. Conditioning chamber contains system of controlled hydraulic and pneumatic nozzles which atomize the fluid uniformly and moderately. —Kearny Manufacturing Co., Inc. (G-197).

Spinning and Twister Frame Tape, called "Over Drive," has hinged center. Construction allows tape to follow whorl contour accurately. Hinge does not contact whorl crown, resulting in low percentage of slip to the small diameters adjacent to crown. Spindle speeds can be increased from 1 to 3%, according to the manufacturer. Power savings ranging from 6 to 9% are said to be attainable.—Lambeth Rope Corp. (G-198).

Narrow Aisle Truck for handling quills, roving, etc., is said to be narrower than conventional trucks, permitting easy passage in narrow alleys. Frame is covered with new plasticized canvas which is mildew resistant, soilproof, and waterproof. —W. T. Lane & Bros., Inc. (G-199).

FOR FURTHER INFORMATION

on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Improved Cop, Bobbin, and Butt Winder for rewinding all types of yarns features a centralized lubrication system for easy maintenance. —F. A. Lazenby Co. (G-200).

A Master Oiler, available as a kit complete with necessary adapters for connecting to existing oil holes, provides centralized lubrication for all bearing points on machines such as combers, small twisters, looms, etc., which require periodic applications of oil. Advantages: insures bearings receiving right quantity of lubricant at right time; time required for oiling reduced to seconds; no machine down-time for oiling; oil and power consumption reduced. (G-201).

Centralized Lubrication for Twister Rings. Equipment is available from stock for providing centralized lubrication for twister rings. Mill mechanics make installation. For each two rings it is necessary to drill two holes in ring rail to mount injectors; drill oil passage holes into rings. No wick required. Automatic or manual controls available.—Lincoln Engineering Co. (G-202).

Automatic Controls for Variable Speed Drives. Electronic, pneumatic, and hydraulic controls are now available for use in conjunction with P.I.V. variable speed drives. Electronic type is particularly suitable for systems where control point of a process is located some distance from drive. Pneumatic control is most economically incorporated into systems principally pneumatic in operation. Where extreme sensitivity, highly accurate control or rapid response is necessary, the hydraulic unit is recommended. (G-203).

Direct Connected Card Drive. The Electro-Fluid Drive has been redesigned to incorporate a worm and coupling that enables this unit to be connected directly with the card cylinder. Advantages: space saving; reduction in motor horsepower requirement.—Link-Belt Co. (G-204).

Improved Loom Drive. Quick starting, quiet operation, and constant speed are features cited for an improved motorized V-belt loom drive with multiple disc clutch. Powered by a Fairbanks-Morse axial air gap totally enclosed motor which operates at 1800 rpm; motor has flat copper rotor of large diameter to produce flywheel effect that evens peak loads. Use of gears is eliminated. Design of clutch insures against drag and abrasion, eliminating heat when in off position. Easily installed. (G-205).

Improved Multiple Disc Brake. Floating discs are employed to provide maximum braking efficiency. Long life and repeated stopping of loom crankshaft in any position demanded by stop motions is insured. (G-206).

Loom Stabilizer. Recent improvements in a loom stabilizer are said to make possible increased loom speeds, reduced maintenance costs, and improved cloth quality.—H. F. Livermore Corp. (G-207).

Steam-Jet Loom Cleaner, JC-30 LCS, is an all-electric portable unit 20 in. wide. High pressure, dry steam from the built-in boiler is delivered to steam lance, and under finger-tip control of the operator, directed against loom parts to be cleaned. Solvents or detergents can be atomized by steam for cutting caked grease or waste accumulations. Moisture released will not interfere with humidity control of weave room. A loom can be cleaned in 15 minutes with this device, according to the manufacturer.—Livingstone Engineering Co. (G-208).

Size Homogenizers manufactured by Logeman are now available in two capacities; a one cylinder 50 gph model and a three-cylinder 150 gph model. Machine incorporates unique floating piston design.—C. W. Logeman Co. (G-209).

Nylon Hosiery Presetting Box for monofilament constructions is automatic once temperature and time cycles of operation are established. Operating cycles need not be adjusted or reset for each load. Avail-

able for operation on low pressure steam, electricity, or a combination, the machine can handle from 96 to 250 dozen pairs per load. It enables operator to preheat, humidify, exhaust, dry, and cool material accurately.—Lydon Brothers, Inc. (G-210).

Hydraulic Pressure Top Rolls are incorporated in McGlynn Hays worsted frame, a change from hand lever and spring system formerly featured. Constant and uniform pressure is maintained in ball bearing top rolls by oil delivered from central pump.—McGlynn Hays Industries, Inc. (G-211).

High Load Bearing Top Roll for the American System of worsted spinning and for modifications of cotton system where long staple fibers are processed, can carry a weight up to 75 pounds. The Climax ball bearing roll requires no oiling, a minimum of picking and cleaning, and is said to improve the quality of yarn produced.—Machinecraft, Inc. (G-212).

FOR FURTHER INFORMATION

on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Positive Overfeed with Selvage Guider for positive shrinkage control. Operation: Drive for overfeed is through variable speed transmission, input shaft of which is synchronized with main tenter drive. Output shaft of transmission drives two overfeed wheels mounted on entering rails of tenter frame. Overfeed is set on dial to give from —5% to +35% slack on fabric. Retractable pins within nylon brush on each overfeed wheel positively grip selvage and do not release it until it is pinned to tenter chain. Selvage guider brings cloth to meet rails. Photo-electric beam engages the selvage and instantaneously operates guider arm which is pivoted tangent to the overfeed wheel. What it does: positively and uniformly controls amount of slack; maintains pinning of each selvage on tenter chain within 1/16 inch tolerance; handles all types of fabrics and finishes; speeds up to 100 ypm; can be attached to existing tenter frames. — Marshall and Williams Corp. (G-213).

Free Machining Tool Steel, called "Graph-Mo," contains graphite for extra lubrication; permits working speeds of 160 surface feet per minute. Non-deforming; oil hardening. Entire bar is colored to aid in identification. (G-214).

Cold Finished Steel, produced by patented process of cold work and furnace treatment, is designated "Stressproof." Characteristics: uniform in cross section; guaranteed strength of 100,000 lb per sq. in. minimum yield point; has unusual wearability, not necessary to heat treat, lends well to induction hardening if necessary; excellent machineability. Available in cold roll and ground finish bars.—A. Milne & Co. (G-215).

Regain Control at Constant Slasher Speed. A constant speed control system for measurement and control of cotton warp regain incorporates an electronic Moist-O-Graph controller. Slasher operator adjusts speed of slasher according to the set being run and temperature of cylinders is automatically adjusted to give proper drying rate. Benefits: regain is maintained within close tolerances; production schedules are easily regulated; optimum speeds can be run as determined by sets being sized. — Minneapolis-Honeywell Regulator Co., Industrial Division. (G-216).

Electric Cloth Roll Lift Let-Off. Elimination of the need for lifting heavy cloth rolls is the outstanding feature claimed for this device which is a center bar let-off with push button control cloth roll lift. To load machine, operator simply places roll on tray of lift and presses button to start elevator; roll is lifted to a point where operator can slide shaft through roll. (G-217).

Free Wheeling Expander for Narrow Fabrics has been developed. It has the same features as other expanders manufactured by this concern.—Mount Hope Machinery Co. (G-218).

Automatic Warp Size Viscosity Control System combines the advantages of cooking and homogenizing, the manufacturer claims, producing uniform size solution of controlled viscosity. Size is cooked and delivered to size box heavy enough to more than overcome effect of condensation and normal agitation of size in box; a Viscometer measures, records and automatically controls the operation of a motor-driven centrifugal pump which homogenizes size to a constant viscosity.—Norcross Corp. (G-219).

Improved Direct Humidification is obtained with the Gradumatic system designed for continuous operation at a varying evaporative output automatically graduated to suit requirements for constant humidity at all times. This feature dispenses with alternate under and over humidification of "on and off" atomizers. Humidity requirements are detected by Psychrostat and Gradumatics respond accordingly. Water pressure less than air pressure provides safety. Diaphragm in spray head permits free fit without leakage and operates cleaning mechanism for air and water orifices. Unit can atomize from 2 to 16 pounds of water per hour. (G-276).

Self Cleaning Tank Screen for air washer type air conditioning installations where fly, lint, or other solid matter is a factor features cylindrical revolving screen through which all water supplied to pump suction passes. Outside screen surface is kept clear of dirt accumulations by adjustable row of spray nozzles which force sheet of water through screen. Dirt and lint settle back into tank or float down overflow. Interior of screen forms clearwell for water to air washer sprays. —Parks-Cramer Co. (G-220).

Seam and Slub Detector, for installation on any type of hydraulic calender, releases pressure on rolls at approach of seam, knot, slub, etc., thereby eliminating any damage to filled rolls in a calender stack. Electronic relays and timers delay the opening of the rolls until the seam is within 3 inches of the nip. At this point pressure is released, the rolls opened, the seam passes through and pressure is then applied and rolls closed within 3 inches after passage of seam through last nip. Advantages: roll life is increased and maintenance decreased. —B. F. Perkins & Sons, Inc., (G-221).

CALCO **dyelines** No. 15 of a series

PUBLISHED BY AMERICAN Cyanamid COMPANY CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT, Bound Brook, New Jersey
New York • Chicago • Boston • Philadelphia • Charlotte • Providence

Application Hints for Azoic Dyes

Azoic dyes are insoluble and must be manufactured on the fiber by the dyer. Their application, therefore, involves additional knowledge and control beyond that devoted to other dyeing procedures.

Satisfactory dyeings are based on attention to the following points:

1. Preparation of an absolutely clear stock solution of naphthol.
2. Perfect clarity of the naphthol bath throughout the impregnation period.
3. Removal of excess naphthol liquor and superficially attached naphthol before coupling.
4. No hydrolysis or other decomposition of naphthol before coupling.
5. The correct proportion of base or salt to naphthol.
6. Coupling at the best pH and temperature for the specific base or salt involved.
7. No decomposition in the coupling bath during coupling.
8. Adequate but not excessive aftertreatment to remove loosely fixed azoic dye.

Calco technical field service men are well versed in the theory and mill practice involved in the application of azoic dyes and are available to discuss and demonstrate the methods which contribute to the practical achievement of these eight ideals.

Popular combinations of Calco Naphthosols with Calco Naphthosol fast color bases and fast color salts produce shades which combine richness, brightness, good fastness and moderate cost that cannot be obtained with any other class of dyes. The Calco line of azoic dyes includes:

Calco Naphthosol	*Calco Naphthosol Fast Color Base*	*Fast Color Salt*
ASF Conc.	Red KB	–
SWF	Red B	Red B
D	Red 3GL	Red 3GL
RL	Red GL	Red GL
BO	Scarlet G	–
BS	Scarlet RC	Scarlet R
ASP	–	Scarlet GG
OL	–	Orange GC
G	Bordeaux GP	Bordeaux GP
–	Blue B	Blue B
–	–	Blue VB

A Unique Fluorescent Compound

Calcofluor* White RW, recommended for acetate, nylon, silk and wool, increases the whiteness of bleached or scoured fabrics by causing them to fluoresce. By this phenomenon, ultraviolet rays are converted to visible light. The fluorescence of Calcofluor White RW is a bluish-white which neutralizes the natural yellowness of the fiber. In addition, by converting ultraviolet into visual light, the material will reflect a greater quantity of light than untreated material.

Pastel shades treated with Calcofluor White RW appear much richer and brighter in daylight.

Calcofluor White RW works well over a wide range of pH. It can, therefore, be applied during many processing operations such as scouring, bleaching, dyeing and rinsing. It can be dispersed in soap or sulfated alcohol, or dissolved in alcohol or 10% sulfuric acid solution—depending on conditions required.

*Trade-mark

For The Textile Bookshelf

Determination Of The Solubility Of Dyes (Calco Technical Bulletin No. 801) by C. L. Zimmerman and H. R. McCleary. Discusses theoretical aspects of solubility, methods of attaining saturation, lists the approximate maximum solubilities of several Calco acid and direct dyes.

Coloring With Resin-Bonded Pigments (Calco Technical Bulletin No. 777)—reviews the history, general theory, methods of applying these pigments to textiles, their application in printing and in plain shade coloring.

Revision – Descriptive Index of Calco Technical Bulletins (Calco Technical Bulletin No. 761A, New Second Edition)—abstracts all bulletins published to date; helpful cross-index aids in selecting bulletins pertaining to special problems.

Reprinted—The Practical Art of Color Matching (Calco Technical Bulletin No. 573) by William H. Peacock, Technical Service Department. A popular bulletin reprinted to include the latest thinking on this important subject.

Approximately 150 trailer trucks and tank trucks pass through the Calco gatehouse every day.

Theme Song of all C&K Looms.

TEXTILES:
Song of the Loom

At the time in its long history had the need and value of modernization been so forcibly brought home to the textile industry. Some 20,000 textile men—in everything from private Beechcraft planes to chartered Pullmans—converged last week on Atlantic City's cavernous Auditorium. There they inspected more than 1,500 machines worth $5,000,000 exhibited by 200 different manufacturers. It was the first such show in eleven years, and the industry's largest.

Changes within the industry became even more apparent during last spring's sales and production slump. The major textile companies acted quickly and decisively. By fall, they had unloaded top-heavy stocks by means of sizable price reductions.

Modernize—or Else: Last year's shakedown also eliminated many inefficient, high-cost mills. According to the CIO Textile Workers Union, about 137 mills, employing nearly 50,000 workers have been liquidated since the war, most of them within the past twelve months.

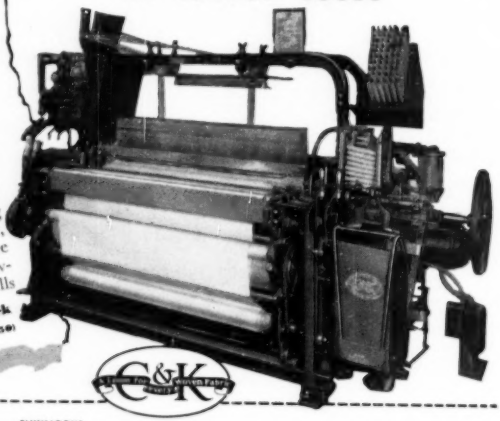
Despite the industry's technical progress, obsolete equipment still burdens many plants. More competition both at home and abroad is also increasing the need for more efficient operation. Fabric exports—which used to constitute more than a tenth of total output—are down . . .

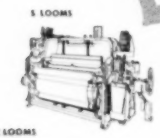
All of this gave machinery makers at last week's exhibition a ready-made sales argument: Mills with 25-year-old equipment must modernize or give up the ghost. The first five months of 1950 have been fairly prosperous so far, particularly for rayon producers and also for cotton fabric makers. Even woolen and worsted mills, despite high wool prices, are doing slightly better than a year ago. However, the competitive threat posed by more modernized plants, synthetics, and low-cost fabrics from foreign producers spells trouble for the future.

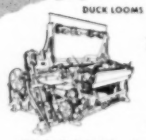
Newsweek
(May 22, 1950)

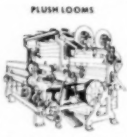
Modernize..

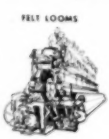
with proved automatic C&K Looms that weave finer fabrics...faster... at lower cost!

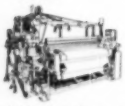








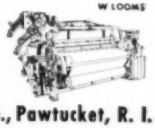




WORLD'S LONGEST LINE OF LOOMS...BUILT BY

Crompton & Knowles Loom Works

WORCESTER 1, MASSACHUSETTS, U. S. A.



Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

"Nuclotex" Carding. A more uniform web, more consistent weight per yard of sliver, and a noticeable improvement in luster are advantages reported obtained with a Platt Bros. cotton card equipped with the "Nuclotex" roll, a second licker-in located immediately below the conventional licker-in. More trash and short fibers are extracted at the feed end of the card without loss of good fiber, it is claimed. Card production can be increased 15% with "Nuclotex" while maintaining the same product quality; or, if desired, quality can be improved by leaving production of machine the same. If combing is included in processing, load on that machine is decreased; also percentage of noils extracted is decreased. (G-222).

High Draft Roving Frame. The Platt Bros. M. S. 2 high draft roving frame, according to the manufacturer, gives a considerable increase in production, reduces end breakage and waste accumulation, provides excellent fiber control and produces roving of high strength and regularity. Other features: built-in motor, centralized lubrication, underframe parts completely enclosed, file cut gears provide smooth and quiet operation, only one drive shaft each for spindle and bobbin gears, drafts up to 30, controls on carriage. — Platt Bros. (Sales) Ltd. (Atkinson, Haserick & Co., U. S. agents). (G-223).

Complete Pin Tenters, manufactured by John Dalglish & Sons Ltd. of Glasgow, Scotland, and equipped with the new electronic guider and overfeed previously described, are now available in this country. Machine is particularly suited for processing of light fabrics. According to the manufacturer there is no tension on warp or filling when guiding commences. (G-224).

Nylon Hosiery Setting Cabinet is designed to pre-set prior to looping and seaming, so as to impart firmness to stitch and make it resistant to rough handling and storage damage. Machine is heated by electricity. Hot air is recirculated. Hosiery is assembled at knitting machine on aluminum carrier which holds from 8 to 10 dozen pairs. Carriers are loaded onto tubular aluminum truck with capacity for 14 carriers. Truck is wheeled into cabinet for 30 minutes at controlled temperature of 240 F. Manufacturer claims 50% reduction of pull threads and scratches, 20% increased production in seaming department, 15% increase in output of first quality work.—Proctor & Schwartz, Inc. (G-225).

High Speed Sectional Warper. Ateliers Roannais de Constructions Textiles of Roanne, France, have made arrangements for the sale of their Type "O. R." sectional warper in this country. The machine consists of a headstock on which are fitted all the driving mechanisms and controls to which is coupled the warping drum. The whole machine displaces itself on rails in front of a fixed reed holder on which are fitted the leasing reeds, section reeds, and the guide holder. Features: accurate and simple control, easy access to all threads, accurate warp length, large capacity drum, movable drum carriers, back beaming is eliminated, warping time is reduced. — Robert Reiner, Inc., (G-226).

FOR FURTHER INFORMATION
on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Single Color Printing Machine for rotary intaglio printing on fabric and vinyl film is designed for smooth, stepless control. A hydraulic power unit, reduction gear, and fluid motor are located in self-contained cabinet on one side of machine. Control panel is mounted in face of unit. The cylinder and mandrel bearings are self-aligning, anti-friction roller type, capable of taking radial and thrust loads. Machine can accommodate copper printing rollers from 14 to 54" in circumference. Speed range is 20 to 80 ypm. Printing pressure is indicated on gauges. Flow control valves maintain an even operation of the print roll across the face. Comes equipped with hydraulic doctor oscillator adjustable for length of stroke and for a desired number of oscillations per minute.—Rice Barton Corp. (G-227).

Stainless Steel Bleach Bowl for continuous bleaching of scoured wool prior to drying handles up to 2500 pounds per hour in 48-inch width. Features: automatic temperature controls, automatic dump valves, pneumatic loading on squeeze rolls, direct motor drives. Other uses: carbonizing range, flameproofing of cotton staple, etc.—C. G. Sargent's Sons Corp. (G-228).

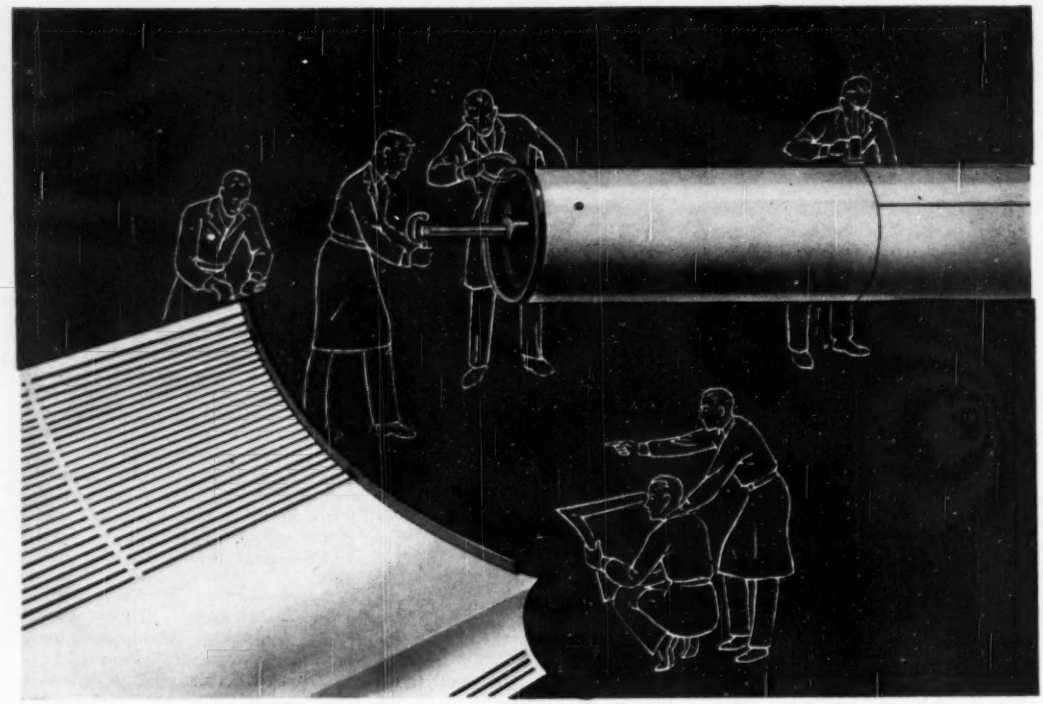
Extra Wide Field Microscope for examination of textile fabric construction at 10 to 30 power is available as a binocular model. Approximate working distance of this Leitz instrument is 3⅛"; depth of focus is adequate for study of three dimensional objects, and field of view varies from 0.32 to 0.63 in. Prism tubes are individually adjustable for interpupillary distances between 56 an 74 mm. Total fine and coarse adjustment of focus is over 4 in.—George Scherr Co., Inc. (G-229).

Two-Piece Loom Binder with metal detachable face allows for permanent setting of the swells. Made with light metal or "Texwood" laminated backs, the Galland binders permit retention of the face contour normally lost in sanding and cleaning old covers on wood swells. The body of the binder becomes a component part of loom. Life of leather is lengthened due to special leather and shuttle strike cushions, it is said.—Schmidt Mfg. Co. (G-230).

Tensile Strength Tester, operating in break range from single filament to 4 lb tensile, features an enlarged 15-inch Tensilgram recorder which facilitates machine operation and group test curve analysis. The IP-2 Serigraph is especially suited to rubber thread. Gear box controlling the incline-plane loading of specimen incorporates quick-return action for tensile elongation determinations, and slow-return for hysteresis or fatigue tests.

Clamp Model A5, said to be of stronger construction than standard A1 clamp, is adaptable to Model J skein and cloth tester.—Scott Testers, Inc. (G-231).

Noble Comb with individual drive is push-button operated. Positive control to the brush motion, and simplified brush adjustment are featured. Machine is synchronized with coiler.—James Smith & Sons, Inc. (G-232).



WHY JOB ENGINEERED PRODUCTS

Give You Greater Economy

When you install Jenkins Dynamically Balanced Cylinders and new, improved Card Screens . . . you install products scientifically designed to give smoother performance . . . precision built to give longer wear.

You get maximum uniformity in all parts of every product . . . machined by equipment which is developed and used exclusively by Jenkins. You get the advantage of Jenkins' own complete machine shop, equipped to meet *individual* specifications . . . products made *for* the job, rather than merely adapted to it.

Jenkins engineered workmanship means smoother, steadier cylinder performance . . . perfect card screen settings. It means maximum production, uniform yarn quality, and lower maintenance cost in your mill.

JENKINS' *Dynamically Balanced* SPINNING CYLINDERS

JENKINS METAL SHOP

For long-range economy, rely on Jenkins' 37 years of experience and guaranteed-quality workmanship.

JENKINS METAL SHOPS

INCORPORATED

GASTONIA, NORTH CAROLINA

Four-Shuttle Automatic Loom. Type 100 W, has flywheel-equipped main shaft driven three times as fast as loom cycle for rapid start and smooth operation. Spur wheels, used instead of crank shaft, are replaceable for changes in beat-up. No parts requiring adjustment are located underneath warp. Easily fixed and cleaned from above since arch has been eliminated. Other features: low maintenance costs, easy operation, versatility, new positive shaft drive, number of picks per inch can be changed by simply adjusting a scale.—Societe Anonyme Adolphe Saurer. (G-233).

Improved Dye Spindle. 50% greater flow of dye liquor is said to be obtainable with a recently developed dye spindle. Other features: guaranteed for 10 years; indestructible; better dyeing; and lower cost.—Standard Fabricators, Inc. (G-234).

Double Field Twister is said to double production in comparison with normal twisters. Twist is obtained by turning both feed bobbins and winding spindles. Traveler tension has no effect on yarn breakage since yarn in contact with traveler has been strengthened by insertion of half the final twist already. Crepe twist can be obtained in one single passage, the manufacturer states. (G-235).

Rectilinear Comber, manufactured in Italy, operates at speeds of 110 to 125 nips per minute. Of monoblock construction, machine is vibrationless. Comes equipped with burring device. Depending on quality of wool, average top production ranges from 14.5 to 19.8 lb per hr.—Stellite American Corp. (G-236).

Oil-Mist Lubrication System provides positive, automatic, continuous, controlled oil lubrication to all types of parts including ball, roller and plain bearings, as well as vees, slides, conveyor chains, etc. The Oil-Mist lubricator unit is connected to an air supply line and delivery lines are in turn connected to each of the bearings to be lubricated by the system. The lubricator atomizes the oil and delivers a constant flow of Oil-Mist, providing a lubricating film on all parts connected to the system. The Oil-Mist may be reconverted into a fluid by using condensation fittings as it enters the bearings, if desirable. Protection of bearings from contamination, reduction of bearing operating temperatures, prevention of internal friction, prevention of product spoilage, reduction of oil consumption are typical advantages claimed.—Alemite Division, Stewart-Warner Corp. (G-237).

Power Sweeper clears path 24" wide at speeds up to 8 mph. Less than 29" wide, Model 24 is suited for narrow alleys. Automatic clutch facilitates reversing, forward speeds. —G. H. Tennant Co. (G-238).

High Production Comber with automatic can changing coiler head yields high quality work at low cost, manufacturer states. Called Termacomber, machine is of steel frame welded construction which permits assembled ready-to-run delivery to mill. Features electric stop motions with enclosed wiring, splash lubricated gear boxes, ball bearing half lap and brush shafts and detaching and drawing rolls. Pan and table tensions and draw rolls and coiler tensions equipped with change gears which allow close settings. Waste can be adjusted from below 6% to over 25%.—The Terrell Machine Co., Inc. (G-239).

Ribbon Measuring Machine is new small edition of Trumeter measuring apparatus. Ribbon is inserted into slot of machine and pulled through with measurement showing on counter. Resets to zero by pressing lever. Automatic brake prevents over-spinning of measuring rollers. Guides can be adjusted to accommodate various ribbon widths. Apparatus adds or substracts according to direction of ribbon passage. Main rotating shafts fitted with ball bearings. Speed is 400 feet per min. (G-277).

Cloth Inspection Machine, manufactured by Henry Livesey Ltd. and designated type "R", features simplicity of design and low cost. Constant cloth speed throughout. Adaptable for winding silk and rayon fabrics from or onto cardboard tubes, wood cloth rollers with pikes, or plain wood rollers. Angle of table is adjustable. Contains anti-creasing and adjustable cloth tensioning devices. Cloth is wound toward examiner.—Trumeter Co. (sole agents for U. S. A. and Canada). (G-240).

Improved Ring Twister. Features of a twister now available in this country are: Improved builder motion which utilizes a gear drive instead of cams and rocker arms; foot-operated internal expanding brake on each spindle; balanced ring rail; reversible tape drive. Designed for yarns of fine, medium, or coarse counts, for ring diameters up to 5½ inches, gauges up to 7 inches, 8-inch lift packages; adaptable for dry or wet twisting.—Tweedales & Smalley Limited (Atkinson, Haserick & Co., U. S. agents). (G-241).

Acid and Alkali Resistant Paint for finishing plants, dyehouses, and bleacheries protects interior surfaces from severe chemical conditions, it is claimed. Chemically inert and non-saponifiable, the "Barreled Sunlight" product can be used over wood, metal, concrete, masonry, walls, ceilings, floors, and machinery. —U. S. Gutta Percha Paint Co. (G-242).

Tapered Package Attachment is available for face drive twisters. It consists of a track that directs the traverse thread guide and assures perfectly built tapered-end packages, according to the manufacturer. (G-243).

Twister Has Slow Starting, Slow Stopping Motor. The U. S. Acme doubler twister is now equipped with a Reliance slow starting and slow stopping motor. Advantage claimed is that yarn is continuously kept under tension, with the result that there are no ends down due to tangled yarn on starting or stopping. Machine also has new builder motion for straight or bottle winds.—U. S. Textile Machine Co. (G-244).

On-Loom Bobbin Winding is accomplished with Unifil, a device which winds, strips, and readies filling bobbins for automatic transfer at Draper loom. Winder speed is 10-20% faster than yarn consumption rate. Features unit replacement while loom is in operation; reduces handling of filling yarns; eliminates large bobbin inventory; minimizes

FOR FURTHER INFORMATION on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

mixed filling. Operation is performed with 11 bobbins, 7 of which are in full bobbin magazine, 1 each in stripper, shuttle, empty bobbin magazine, and in winding position. Manufacturer claims that need for a filling winding room is eliminated. (G-245).

Drum Winder, an eight-spindle Auto-Coner, features automatic transfer, knot tying, and sizing for each spindle. Machine incorporates pressure cleaning of tension and slubcatcher devices, and partial waste removal. Operating on a vacuum, nozzles at spindle retrieve supply and take-up package ends when break or runout occurs and eject into knotter where they are tied. Conveyor belt transports empty supply bobbins to collecting point and creel mechanism feeds full bobbin into position. Sizing attachment is adjustable within range of several layers to a diameter of 9 inches. (G-246).

Precision Winder features straight thread line, high speed take-up, ball bearing spindles, magnetic straight line tension, mechanically controlled pressure, self - threading thread guides, and double sides. Can be built as increasing or constant yarn speed machine or a combination of both. Standard number of winds are 2½, 2¾, 3, 3¼, 3½, 3¾, and 4. Builder cam moves spindle frame away from thread guide as diameter of package increases, the speed of movement being controlled by denier change gear—thus assuring accurate density. (G-247).

Twister-Coner performs both functions in one operation; is adaptable for low-twist yarns particularly. Machine features two-for-one spindle, individual spindle stop motion, high yarn take-up speed, constant yarn speed, uniform control of take-up package diameter and density, straight line thread delivery, switch control for "S" or "Z" twist, end-to-end transfer resulting in knotless yarn, and an automatic tailing device. Equipped with master control switch, doffing, donning, and starting operations are facilitated. (G-248).

Direct Take-Up Head for continuous processing of rayon yarn operates on constant yarn speed and controlled tension principles. No. 50 type builds 8-inch diameter package; speed, 250 ypm. No. 59 type is designed for acetate yarns; speed up to 800 ypm. No. 45 type features 10-inch traverse, 12-inch maximum package, speeds up to 200 ypm. for tire cord.—Universal Division, Universal Winding Co. (G-249).

Unirail Uptwister features section construction permitting pre-erection of machine prior to delivery. Unit replacement, stop motion mechanism, plastic take-up rolls, Formica gears, adjustable ribbon breaker, permanently mounted headless package tube holders, self-threading guides, take-up roll-out attachment, tail winder, Uniflex spindle, and vibration isolator are provided. (G-250).

Two Winding Spindles, the Universal two-for-one and the Atwood Uniflex, are built for high speed production. The two-for-one produces larger packages, less end breakage, and better quality, according to the manufacturer. On flat yarn one turn of twist is inserted prior to the ballooning of the strand. Uniflex is precision-built roller bearing spindle lubricated by oil metered through porous bronze bushing. Oil felt holds 47 drops—sufficient to keep spindle running one year without additional lubrication. Uniflex flexible blade allows spindle to operate with low power consumption. — Atwood Division, Universal Winding Co. (G-251).

FOR FURTHER INFORMATION
on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Yarn Evenness Integrator automatically indicates and records the percentage average variation measured over a 2½-minute period by the Uster Evenness Tester. Device operates at speeds up to 100 yards per minute.—Uster Corp. (G-252).

15-Ton Padder is equipped with two 19½" diameter rolls. Pneumatic pressure system controls each cylinder separately, using 86 psi. Color pans, guide rolls, and submersion rolls are stainless steel. Powered with variable speed drive range from 30 to 120 yards per minute in standard model; higher speeds available. Chain driven dry disc type take-up provides smooth operation.—The Van Vlaanderen Machine Co. (G-253).

Free Riding Slide Hook for silk type heddle frames provides complete freedom of movement for heddles on heddle rods and eliminates tendency to tilt or bind. Permits warp to be fully self-adjusting, preventing formation of streaks and marks in finest fabrics. (G-254).

Easy Heddle Repair is possible with a new "Lock-On" repair head. When heddle breaks, broken end loop is removed with pliers; heddle shaft is inserted into repair head and clip and tongue folded over, locking head securely on shaft. Loop is then slipped over heddle and loom restarted.—Walker Mfg. Co., Inc. (G-255).

Improved Pin Drafter features accurate timing obtainable between adjacent screws and between sides of head, lessening possibility of jams, lapping, and resultant down time. Parallel travel of fallers is assured by close timing in side gear trains and infinite adjustment at cross-drive shaft. Improvements have been made in the cross-drive shaft assembly, entering section, nip roll section, and center drive gear box. Pushbutton controls have been relocated for operator convenience. 45-day oil supply is carried in new type oil cups. (G-256).

Pacific Converter has been refined with integrated drive, extensive application of anti-friction bearings, dynamic balancing, and generally improved mechanisms.—The Warner & Swasey Co. (G-257).

Thread Guide Surfaces which are abrasion and wear resistant are provided by the Wearex process that is applicable to all shapes, sizes, and interior or exterior locations. The part must be fabricated from plain high carbon steel (carbon content 0.60% - 1.20%). As processed, the steel will be fully annealed. Where higher rigidity or base metal hardness is required, the parts may be heat treated after Wearex application. Thread guide costs and production interruptions caused by guide failures are materially reduced, states the manufacturer.—Wearex Corp. (G-258).

Tubing Machine with Variable Speed Drive. Combination of the examining and tubing processes is the outstanding feature claimed for

a new tubing machine. This has been made possible through the utilization of a variable speed drive. —Werner Machine Co., Inc. (G-259).

Package Type Air Handling Units for spot heating, cooling, and/or ventilating are available in both horizontal and vertical types, for use with air duct distribution systems. Made in five sizes with air deliveries of from 1600 cfm to 12,000 cfm. — Sturtevant Division, Westinghouse Electric Corp. (G-260).

Packaged Electronic Drive. The motor-generator set and control unit of the Type AV adjustable speed drive are now enclosed in a single cabinet. Also a new Life-Line d-c motor is incorporated. Features: more accurate speed response, low maintenance, easy installation. (G-261).

Electronic Annunciator System for Warper Creels. Designed for any creel that is equipped with drop wires, this system provides immediate indication as to location of broken ends. In addition, motor is suddenly stopped by means of electrical braking. No spark is produced when drop wire falls. (G-262).

Type OT Pushbutton Station is light-tight, dust-tight, water-tight, and oil-tight. Enclosure made from die-cast aluminum. Contact blocks are mounted in the box; can be reversed for mounting on cover. (G-265).

Plug-In Bus Duct for transmission of power along ceiling permits versatility in plant layout and machinery arrangement much the same as wall plugs in the home. Plug-in openings at one-foot intervals on alternate sides. Standard enclosure is lint resistant; lint-free enclosure available. (G-266).

Rayon Twister Motor. Designed for use on Atwood, U. S. Textile, and Fletcher twisters, this vertical motor has two sets of mounting holes which make it interchangeable. Sealed ball bearings are pre-lubricated for life.—Westinghouse Electric Corp. (G-267).

Impregnated Fiberglas Roving Trucks and bobbin boxes are now available. Said to be tremendously tough (hardness test of M 115 Rockwell), the boxes have smooth inside finish, no sharp corners, and permanent color. The light weight boxes are not affected by temperature and moisture.—Westport Fibre Corp. (G-268).

Matched Unit Card Drive for smooth, gentle starting and stopping employs a 5 hp motor for woolen card breaker section and Peralta rolls and a 7½ hp motor for finisher end, including tape condenser. Equipment features variable voltage and automatic time relays which eliminate belt jolting and line voltage surges, it is claimed. Known as the McKittrick drive, it yields more work with less horsepower, manufacturer states. — White Electric Motors. (G-269).

Cone Winder for any type yarn produces a cross-wound package built on paper tube of 9-degree taper, progressively increasing conicity to 13 degrees. Each unit is provided with automatic stop motion, automatic securing of tube, and swivelling expanding cone holder. Machine features self threading yarn-guide, automatic lifting and free-running of cone holder for piecing thread, and yarn speeds about 440 ypm when winding from cops. Tapered driving drum stops when cone comes to rest. Staggered winding, and settings for winding cones up to 10 inches in diameter are provided. All shafts run in ball bearings on Vario-Coner, type KM. (G-270).

FOR FURTHER INFORMATION on equipment described here, fill in the Business Reply Card on page 194, listing the key numbers of those items in which you are interested, and mail card at once.

Ring Twister, Model "P", is completely new in design. Chassis is constructed of extra heavy cast iron, rigidly braced to permit high spindle speeds with minimum vibration. Narrow dimension conserves floor space but provides room for creeling. Standard four-spindle tape drive and sturdy frame adapt machine for extra long length. Noise level is reduced by combination of metal and laminated Bakelite gears in head end. Rugged builder drive is mounted on anti-friction bearings. Path of thread from roll to thread guide is vertical, producing more uniform yarn tension, improved quality, and longer guide life. Top rolls are supported with individual fingers, insuring better alignment with bottom roll. Ring rail support bracket traverse is on stationary rod; location reduces yarn soil. Vibration is eliminated due to rigid support. Rings, 2½ to 4½ in. dia. auto-lubricated, can be applied. Stationary separators are full length from bolster rail to about yarn guide, passing through slot in ring rail, and fastened to bolster rail. Creel stand is mounted under roller beam permitting smooth deckboards. Motor is mounted on swing base under foot end of machine with provision for adjustment of drive components. (G-271).

Tying-In Device for magazining supply packages in the creel of Whitin-Schweiter winder unit and Schweiter Vario-Coner winds from spinning bobbins, thereby eliminating coning. Winding units are independent, making possible the winding of different counts and types of yarn on each spindle. No adjustments are necessary when changing yarns. Permits use of larger diameter spinning bobbins. Soiled and untwisted ends are eliminated. Device can be erected on existing winders. (G-272).

Top Roll Weight Tester, formerly available for use only by machinery manufacturer's erection engineers, has been placed on the market. (G-273).

Replacement Parts for Card Room Machinery. A new steel top flat is now being manufactured; also, roller bearing top rolls for drawing frames are available in both the metallic and common types.—Whitin Machine Works. (G-274).

Clip Tenter Adjustable Trailer permits gradual opening of clip jaw at a predetermined point from periphery of wheel at both ends of tenter. These assembles, consisting of a take-up sheave and two expander sheaves for a 9/16 in. dia. heat resistant neoprene belt which guides around trailer, allow the tenter clips to be handled more effectively in opening and closing action. This results in cushioning effect to the impact on moving parts during high speed operation of Model T-4 tenter. —Winsor & Jerauld Mfg. Co., Inc. (G-275).

but how do they get those prices?

"It's those new Reading Machines they bought. We can't match their production of 15 dozen pairs or more in 8 hours."

• • •

The new "Reading" Machines are producing full-fashioned stockings of superior quality and at higher speeds than ever before possible. Many exclusive "Reading" features give higher precision and greatly simplified control in operation . . . 30 sections . . . 51 and 60 gauge.

TEXTILE MACHINE WORKS • READING, PENNA.

The "READING"
Full-Fashioned Knitting Machine

Full-Fashioned Plant Finds Ways for

Reducing Operating Costs

Economy effected by
- **heat recovery system**
- **better inspection facilities**
- **controlling length at knitting**
- **"pressurized" filter system**

EXCLUSIVE

Staff Prepared

INCREASING competition in the industry has forced management in many hosiery mills to seek methods for making improvements at low cost. Quality control has become a more important factor inasmuch as the buyers' market is more critical, and it costs the manufacturer just as much to make a pair of seconds as it does to make first quality hosiery.

Poor inspection facilities and methods often account for seconds being classified and sold for firsts. Mistakes of this kind result in rejects and returned merchandise from the consumer, and the manufacturer ultimately loses the confidence of the customer. Consequently the popularity of the hosiery, or the brand name, suffers and the loss is sustained by the mill.

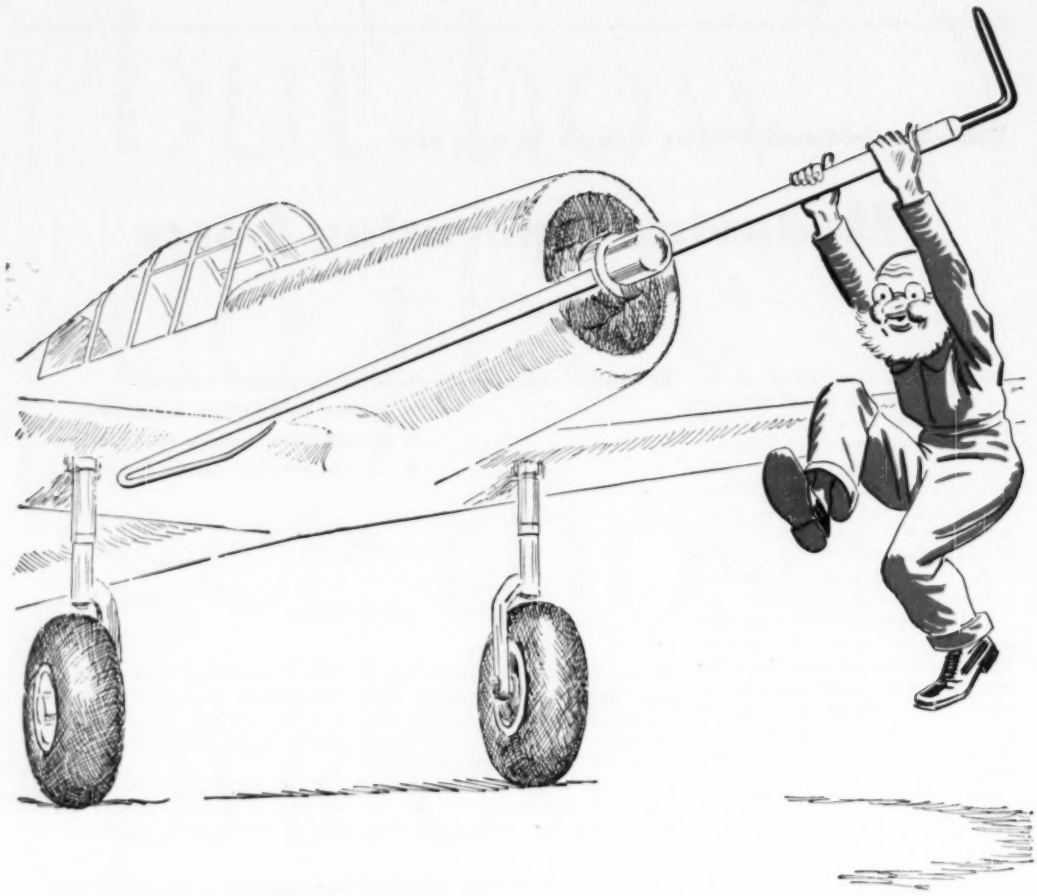
In one mill, the inspection department in the finishing plant was allowing seconds to pass as firsts. An investigation revealed that lighting was adequate, but there was not enough contrast between the table top, on which the dyed stockings were laid for inspection, and the hosiery. The use of glass top tables with lights under the glass was not desired by the operatives who complained of the glare.

After considering the problem, a white "Formica" table top was selected for the inspection operation. These tables have an inlaid measuring scale for checking the length and pairing stockings. The solid white background furnished an excellent contrast, and it has enabled the inspectors to detect more defects than was possible on the old tables. The smooth top is free from rough surfaces that could cause picks and pulls at this operation. Several mills are now using this type of inspection table with good results.

The management of the mill reports better grading and weeding out of seconds, better customer satisfaction, and less hosiery returned because of defects not found in the inspection operation.

Controlling Length of Stockings. In lieu of more expensive methods of determining uniformity of

White Formica table top with inlaid measuring scale for inspecting, checking stocking length, and pairing hosiery. The white surface is not glossy and keeps glare at a minimum, thereby enabling the inspectors to see through the hose and detect more defects.



Balanced!

In an airplane propeller . . . or a Spring-Beard Needle, it's balance that counts.

In Textile Spring-Beard Needles, the careful balancing of needle resiliency and needle length means better performance from your needle bars.

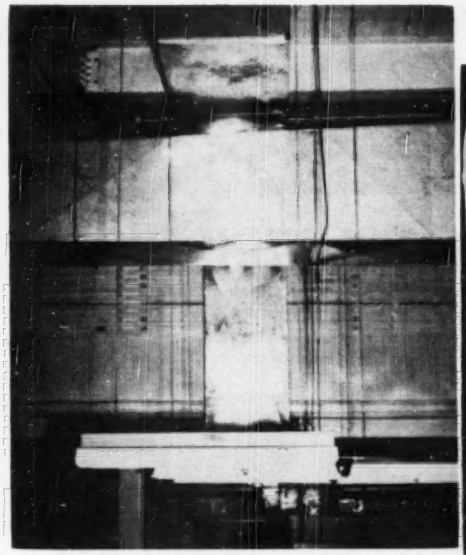
Proper balance is one of the many advantages you receive through Textile's quality controls—automatic and electronic—which constantly check each stage of production. Notice the results in better fabrics, increased profits.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full Fashioned and Warp Knitting



Return duct from heat recovery hoods in the preboarding department. This duct redistributes the air from the hot hosiery forms.

Heat recovery hoods over preboarding forms collect hot air from the overheated area and distribute it to other parts of the building. This procedure helps reduce overall fuel consumption for the plant, and it improves health and comfort conditions for the operatives.

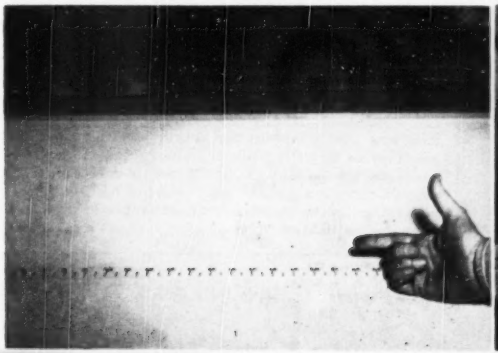
stocking length, this mill has adopted controls at the knitting machines. For example, if a stocking is to have 45 courses per inch, the machine is run for 45 courses and then stopped for a measurement. If a careful examination shows that the number of courses knitted do not measure exactly one inch, the machine is adjusted and the procedure is repeated until the number of courses is correct. This method is old, but satisfactory results can be obtained if care is exercised in making and maintaining the machine settings.

The stockings are placed on a size board to determine overall length of hose and dimensions of the foot. The next operation is preboarding, to a line on the form, with a tolerance of plus or minus ½-inch for overall length. The entire procedure for controlling length is relatively simple and is more exact than some methods employing devices whereby additional possibilities of error are introduced.

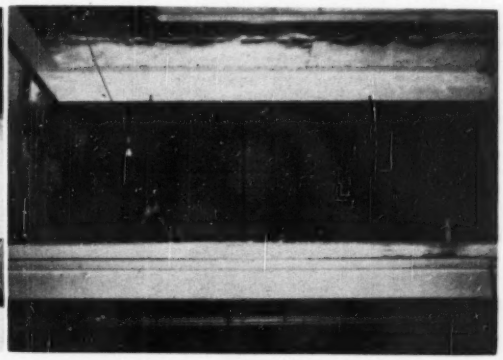
Preventing Soiled Hosiery. The problem of maintaining cleanliness was aggravated by a coke plant and several other industries in the vicinity. Fine black dust seeped in around window openings, through the doors and crevices. All goods in process had to be covered for protection against this menace and all of the equipment had to be cleaned carefully after being idle for a short time.

To solve the problem of dust, an air filtering unit is now being installed to operate in conjunction with a new heating and ventilating system. The ventilating system is designed to "pressurize" the building to prevent any air from seeping in around window and door openings. The filtering unit

Fine dust particles from nearby industrial plants created a problem in maintaining cleanliness in the plant. The fine dust seeped into the building through windows, doors, and small crevices. All stock had to be covered, and frequent cleaning had to be done when the plant was idle on week-ends. Note dust on fingertip collected from table top.



Air filtering system being installed. This installation has a circular filter screen with an oil bath that washes the screen as it revolves. The dirt is thereby washed off, and the screen is wet with fresh oil. This system "pressurizes" the building by increasing the volume of air inside, thereby forcing air through the crevices and cracks from the inside to prevent dirt from seeping in.



Knitting News

NEW SUPREME AUTOMATIC STRIPERS FASTEST IN THE WORLD

Knitters Get Tremendous Production Bonus On Pattern Placer Cloth, Variable Stripes, Plaids, Designs And Patterns

In mills throughout the world, Supreme Automatic Variable Stripers are outproducing competitive equipment by far and are achieving new highs in production rates. These faster knitting rates are the result of exclusive Supreme design developments.

STATIONARY HEAD

Supreme's Stripers use a stationary yarn stand and a high speed revolving cylinder and take-up. This permits higher, super-fast knitting speeds coupled with trouble-free operation. "Pigtail" double tie-ups of yarn cones can be made and each cone used down to the very end.

NEW INGENIOUS, AUTOMATIC STRIPING SYSTEM

Embodied in the Supreme Striper line is a patented and concealed camming method for changing colors of the yarn in the striping feeds. This new method is an entirely new concept in selective striping equipment. A simple, short chain will give any type of horizontal stripe selection desired and will also control the point at which jersey fabrics will be knitted. The chain consists of only a few types of links which count each revolution of the machine and institute changes.

NO-WASTE CUTTERS MINIMIZE FINISHING COSTS

An exclusive Supreme feature available on all Stripers is the new "Synchronized Cutters" which eliminate all waste when changing colors. At the correct instant, the yarn that is going out of action is clipped off close to the narrow seam. It is then held in a unique clamping device along with the other yarns, each ready to go back into action the moment the pattern calls for it.

SUPREME
KNITTING MACHINE CO., INC.
107 JOHNSON AVE. BROOKLYN 6, NEW YORK, N. Y.

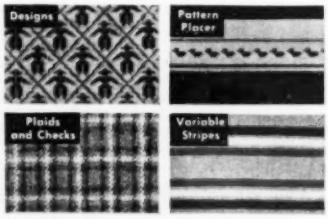
Supreme Automatic Stripers Out-Knit Competition For Stinson Knitting Mills, Inc., Brooklyn, N. Y.

SUPREME STRIPER LINE GIVES KNITTERS "SWITCHABILITY" TO MEET SHIFTING DEMANDS

Supreme Stripers equipped with Automatic Pattern Placers knit a tremendous variety of fabrics such as, plaids, checks, designs, variable stripes or Pattern Placer Cloth. This varied production can all be done on one multi-purpose machine, giving the knitter extraordinary versatility. He can switch from one type of fabric to another whenever the market demands.

INDIVIDUAL PURPOSE MACHINES READILY ADAPTED TO MULTIPLE-USE

Where the knitter plans to produce only one type of cloth he may find the purchase of a single purpose Supreme striper more economical. Supreme's engineering design makes it possible for the knitter to adapt these individual purpose machines to multi-use production. This can be done by the knitter at any time he desires, right on the spot in his own mill.



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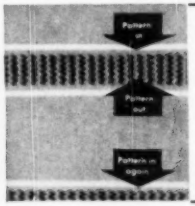


AVAILABLE ON SUPREME'S STRIPER LINE — INDIVIDUALLY OR SIMULTANEOUSLY CONTROLLED PATTERN PLACERS

This new device enables the knitter to place a pattern wherever he wants in plain or striped jersey cloth. Now available; Individually or simultaneously controlled Pattern Placers on all feeds make possible more versatile patterning, larger pattern areas, more production and more unusual fabrics.

draws air into the ventilating ducts and forces air into the building in sufficient quantities to generate enough pressure to force air out of the building through the cracks and crevices instead of allowing dust laden air to enter the cracks.

An economy measure to prevent needless dissipation of usable heat, makes use of heat from the preboarding forms. The arrangement also reduces the discomfort experienced by the preboarding operatives from the concentrated heat in that department.

Heat recovery ducts were mounted over the preboarding forms to collect the hot air. A fan draws the hot air through the hoods and forces it through an overhead duct to other parts of the room for distribution. The operatives are more comfortable with this arrangement, and a surprising amount of hot air is put to good use.

Dual Purpose Boarding Machine

A new machine for the hosiery industry can be used for boarding with heated air, preboarding with steam, or a combination of both.

Known as the Turbo AD-48, the unit was developed especially for mills where steam pressures are not dependable and the quality of the finish boarding might be affected by fluctuating steam pressures. Circulating hot air is directed at the stocking, with more air on the welt and toe where it is more difficult to assure thorough drying.

In the AD-48, there is an air intake at the upper rear of the chamber with a fan blowing over coils which are filled with steam calculated to maintain a temperature of 220 F in the chamber during finish boarding. A valve seals off the air intake when steam is on during preboarding. There is an opening at the lower rear of the chamber for venting air to the nearest window.

There are 48 leg forms in the unit, two groups of 24 forms each.

Turbo Machine Co., Lansdale, Penna.

For additional data, request item G-403, using business reply card on page 194.

Modified Take-Up for Heavy Glove Machines

SOMETIMES Brinton Style TWS glove machines are assigned to the production of heavy gauge work such as typified by the army winter gloves, wool knit. For this class of goods, mills have found that some modification of the conventional Brinton take-up mechanism is helpful.

The fluted take-up rolls are often forced out of positive contact by the thick material and they stop rotating. When this occurs, the take-up tension can be altered, thereby providing a root cause for major knitting imperfections.

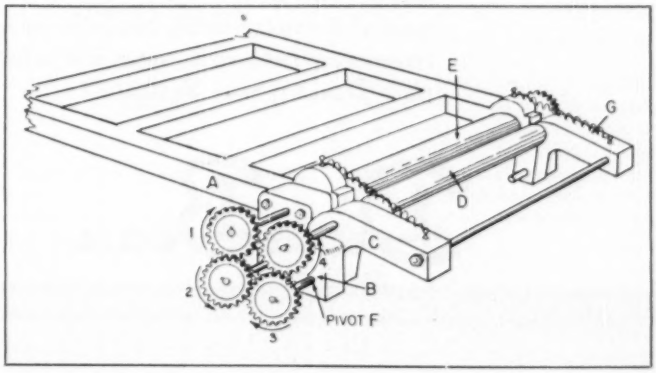
To insure permanent contact of the two fluted rolls, one mill designed the take-ups as pictured in the accompanying drawing. The take-up mechanism operates in this manner (see accompanying illustration):

Fluted take-up roll (E) is driven and rotates gear (1) which is fixed to its shaft. Gear (1) is in mesh with carrier gear (2) which is in mesh with carrier gear (3), the shafts of the three gears having bearings in L-shaped part (B) bolted to take-up frame (A).

Carrier gear (3) drives gear (4) fixed to the shaft of the fluted take-up roll (D) mounted in two L-shaped bars (C) pivoting at (F). Roll (D) is forced into contact with roll (E) by two tension springs (G) fastened to parts (A) and (C).

By means of the pivoting arrangement, gear (4) is always in mesh with gear (3), no matter what the distance is between the two fluted rolls, as determined by the thickness of goods in passage.

The four gears are standard parts GR 57B, while take-up frame (A) was machined from part FE 6.



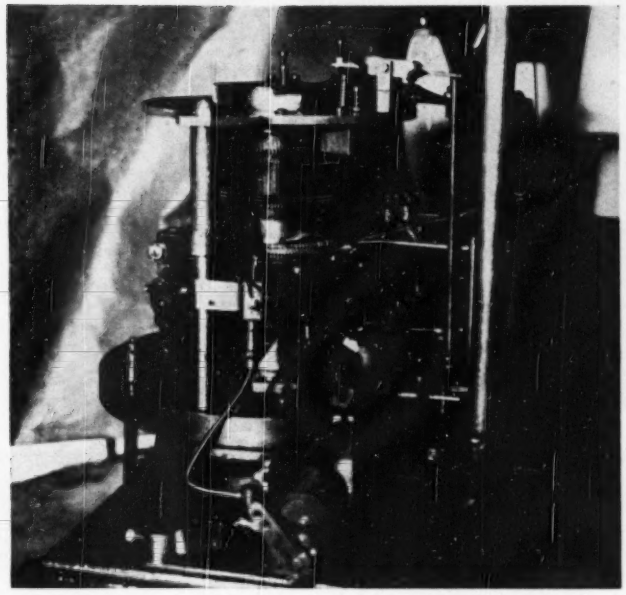
Forgive the unwitting eye that helplessly wanders . . . it's the **Dura Beau** *finish that creates the irresistible allure . . . the smooth, delicate, smoky-dull, ultra-sheer touch of distinctive beauty that adds eye appeal plus extra resistance to runs, spots, snags and pulls!* **Dura Beau**— *more* **Dura***ble, more* **Beau***tiful!*

Dura Beau TEXTILE FINISHES

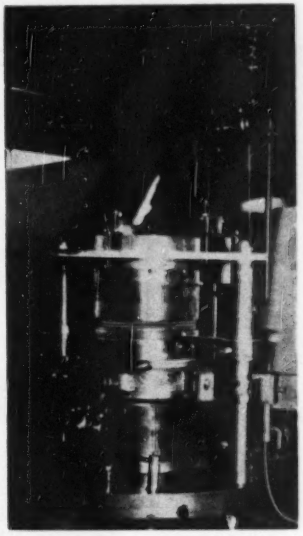
Reg. U.S.A. and Canada

SCHOLLER BROS., INC. • Manufacturers of Soaps, Softeners, Sulphonated Oils and Finishes • Collins & Westmoreland Sts., Phila. 34, Pa. • St. Catharines, Ont., Can.

SERVING THE TEXTILE INDUSTRY SINCE 1907



NEEDLES are placed in alternate slots on both top and bottom cylinders. Where there is a needle in a slot in the top cylinder, the corresponding slot in the bottom cylinder is empty. A modified yarn feed was necessary for the patented machine.



TWO OPPOSED CYLINDERS are fastened together with dowel pins on the reciprocating machine. The cylinders have needles around half their circumference, and they oscillate through 180 degrees during the knitting operation. Note absence of needles on left.

Reciprocating Knitting Machine

Modified B-3 knits socks backwards, reciprocating throughout entire knitting cycle, and closes toe of sock.

DURING the war years the shortage of labor brought forth the need to conserve, and a need was felt to eliminate the looping operation in making children's socks in that trained operatives were scarce. The added expense of the looping operation was augmented by the expense of training new personnel. The currently imposed minimum wage and hour law makes it necessary to give further consideration to cutting costs in operations where the operatives' production varies so widely as it does in looping.

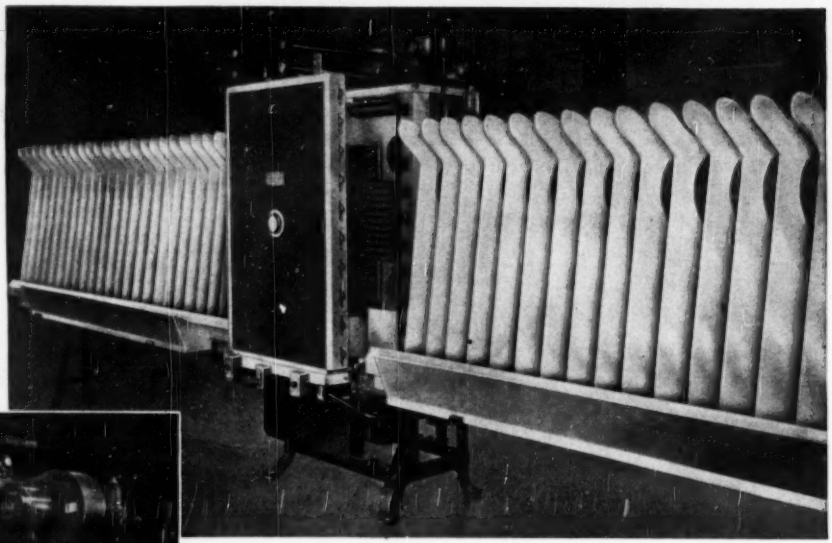
Staff Prepared

Several years ago the management at Spalding Knitting Mills, Griffin, Ga., started working on the idea that a machine could be built to close the toe of the sock and knit the goods in one operation. George Norman was assigned the development job and was given one old S & W, B-3 knitting machine and the facilities of the machine shop to conduct his experiment.

After a few months of experimenting, a machine was developed which would close the toe and knit the leg and foot, but the top had to be put on in a separate operation on a sewing machine. The tops were made on a conventional ribber.

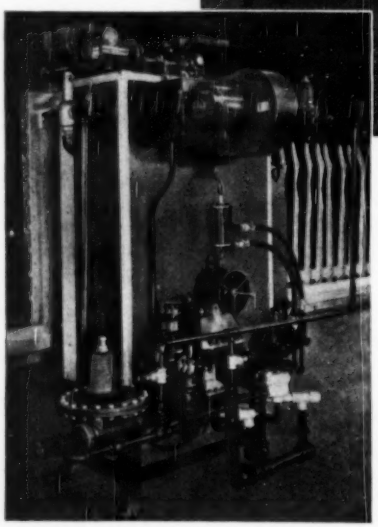
Patented Construction. The machine consists of two horizontally opposed cylinders which reciprocate throughout the entire knitting

TURBO announces the AD-48



Look inside the chamber of this new Turbo AD-48. See the steam coils which maintain a steady temperature during finish boarding. Note the air intake at the upper rear and the vent at lower rear of chamber — both are sealed automatically during preboarding.

Below: Rear view of machine showing fan, air vent and pressure reducing valve.



Turbo has done it again. It's the Turbo AD-48, a new dual-purpose machine for preboarding and finish boarding. Assures static-free stockings perfectly finished by using heated air to keep temperatures steady during finish boarding. It's fast, quiet, automatic. Gentle as a lamb with your finest Nylons.

Two groups of 24 forms each. The operator strips or dresses one group of forms while the other is in the chamber. Forms are interchangeable on all Turbo Machines.

The new Turbo AD-48 is now in successful operation. See the AD-48 before you buy—it's designed to cut your costs and increase your production. Write us today.

TURBO MACHINE COMPANY, LANSDALE, PA.

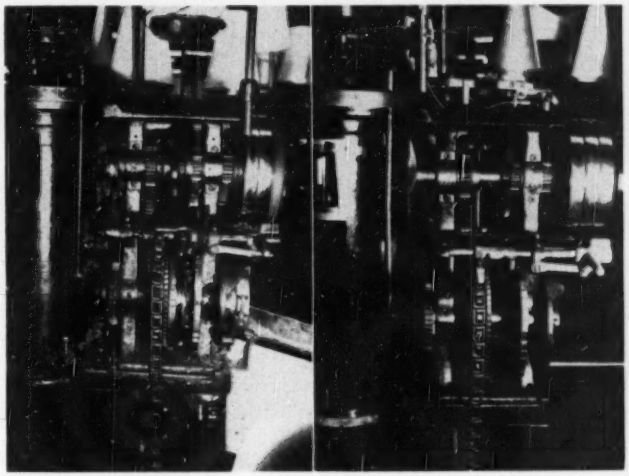
Southern Representative: F. W. Warrington Co., Charlotte, N. C.

operation. Yarn is fed alternately into the top and bottom cylinder except on one course when needles from both cylinders are brought into operation simultaneously to close the toe, thereby eliminating the looping operation. The machine was not designed to knit fancy fabrics, and it knits only plain stitch goods. There is only one yarn feed on the machine. A knot tier was attached to produce a horizontal stripe effect, but this was simply an experiment to see if a design could be made on the fabric.

The needles used are 48-gauge; however the fabric produced is coarser than 48-gauge in that every other needle is removed on the bottom and top cylinders. The cylinder diameter is 3½". Although several cylinder diameters were tried, it was found that by removing needles from the cylinder, any desired size sock could be made. The change does not appreciably affect tension on the loop formation because the machine reciprocates and only traverses half way around the circumference of the cylinder.

Stitch Formation. Two standard 3½" cylinders were used. The top and bottom cylinders are similar, and the top cylinder is driven by the bottom cylinder through dowel pins connecting the two. The stitches in the bottom cylinder are formed by conventional sinkers. Stitches are formed in the top cylinder by verge bits.

Some cams on the bottom cylinder were altered. These include end cams and stitch cams, and they were altered to allow part of them to be thrown out of action to facilitate knitting by the reciprocating action. The cams are arranged to permit them to slide easily in and out of action. There are two stitch cams on the bottom cylinder and one on the top cylinder. This arrangement is necessary because the bottom cylinder knits on both traverses of the reciprocating motion while forming the heel and toe pockets. The top cylinder knits only in one direction while making the foot and leg. The top cylinder is thrown out of action while making the heel and toe pockets.



GEAR ARRANGEMENT on machine (left) from which the patented knitter was made. Right, closeup of gear arrangement providing a continuous reciprocating motion through 180 degrees or half the circumference of the cylinders on the patented machine.

Reciprocating Motion. The clutch of the B-3 machine was altered by removing the parts necessary to prevent the machine from rotating 360°. The clutch was locked in position to make the machine reciprocate 180° continuously.

The yarn feed was changed by installing a special feed finger similar to a Komet (Scott & Williams) feed. The conventional head was removed because it was no longer necessary in that the tops are sewed on in a separate operation.

A B-3 frame was used and B-3 cylinders were adapted for use on the top and bottom cylinders. Where there is a needle in every other slot on the top cylinder, the corresponding slot on the bottom cylinder is empty. Every other slot on the bottom cylinder contains a needle.

Costs. The fabric produced is slightly coarse, and production as compared with a comparable product is approximately 80% as much. Forty-three of these machines were built. One advantage of this knitter is that it runs automatically, provided the yarn supply is kept replenished (notwithstanding mechanical failures).

The cost of one of these modified machines is less than the price of other machines which make similar socks. The cost of operators to run these machines is approximately 20% more than that of operating other machines making similar goods. String work is made on the footer and the top is sewed on. On this patented machine, the socks have to be separated by pulling the thread, and costs are about 2c more per dozen to knit; however by eliminating the looping operation, which costs about 16c per dozen on this type of work (labor only), a considerable saving is made. Part of the advantage is offset by the coarser appearance of the goods. This may be attributed to the alternate needle positions in the cylinders.

The price advantage gained by knitting on this patented machine is said to be about 14c per dozen. This is accomplished in cost reductions by eliminating inspection operations and looping, up to sewing. Fixing costs on the patented machine are slightly higher than on others making this type of hosiery.

DEVICE FOR HEAT SETTING CORRECTED PULLS AND SNAGS

First quality yields from press menders run as high as 93.7% when the "Thermset" process is used for heat setting corrected pulls and snags in hosiery, according to the manufacturer. The heat setting principle involved makes mending positive, efficient, and economical, it is claimed.

Demonstrated at the recent Hosiery Industry Conference in Atlantic City, N. J., the process is said to be adaptable to all methods now being used to correct pulls and snags in press menders, and it can be taught to a mending operator in only a few minutes' time.

In the photo on the left the operator is correcting a snag while the stocking is in the Thermset cup. Right, heat treatment is applied, eliminating snag removal scars.

Thermset, Inc., No. Commercial St., Manchester, N. H.

For additional data, request item G-404, using business reply card on page 194.

Fashion Preferences Still Changing

In some lines of knitwear there has been discussion of changing trends in consumer buying, and arguments have been put forward intending to show what the causes of this may be, and what may be the remedies. As far as experienced market observers can determine, it is futile to try to assess such a situation.

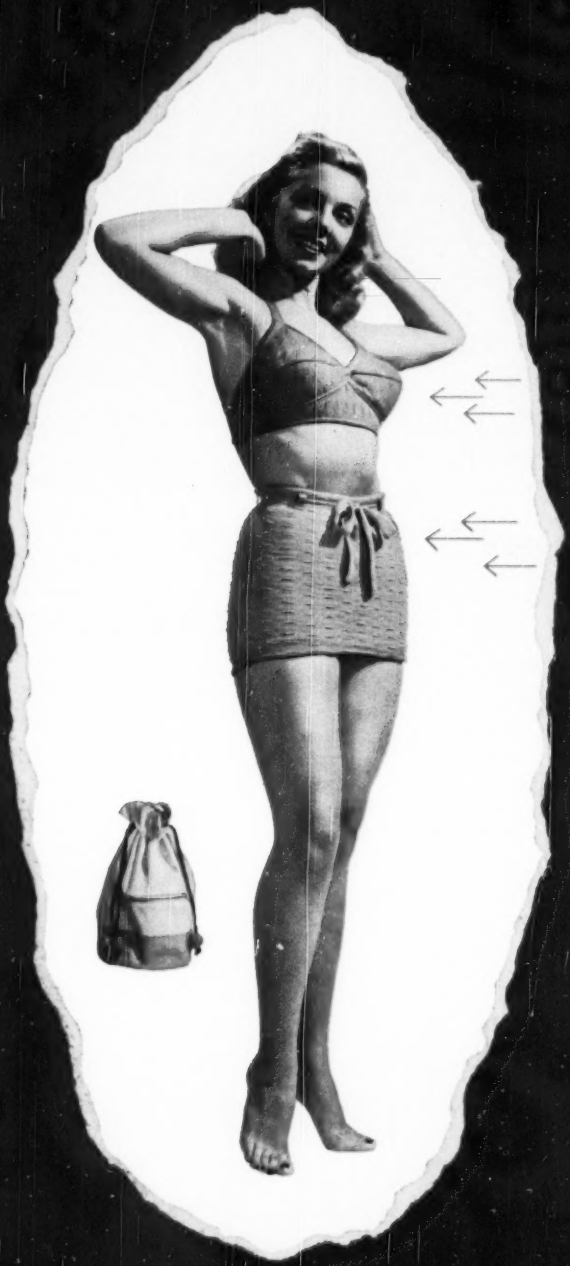
To illustrate, women who stood in line two or three years ago to buy one pair of nylon stockings at high prices, now are confronted with a plentiful supply, in preferred deniers and gauges, at what must seem "nominal" retail prices.

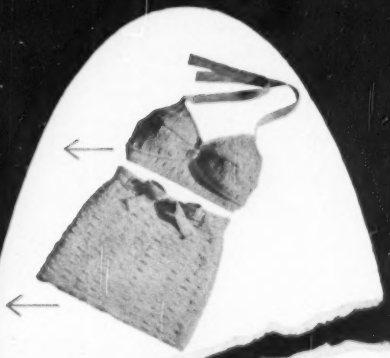
In this process, it seems, the incentive formerly active among women to own a few pairs of nylon stockings now no longer exists. As merchantable supplies have enlarged since the end of the war in one line after another, the consumers' urge to possess these items has diminished. The women simply seem to have turned to buying other things that more nearly meet their temporary fancy.

This condition can be projected right on down the line. Knitters' groups of manufacturers and distributors, and individual concerns, may have done a lot of "heart-searching" to discover where they made mistakes, but after all it was a trend based on human proclivities and was never within their control.

What has happened to some types of hosiery has also worried underwear and outerwear knitters who have lost volume in one way or another and seek to recover it. Every business development has to await its time, veteran authorities assert. Always there is enough new consumer demand to keep any industry together. It will be so this time, this group of observers contends. The knitters are already doing the best merchandising job they can.

Style changes will continue to be welcomed by alert manufacturers. Some are being worked out now for offering later this year, or early in 1951. The general volume of consumer buying will continue to ebb and flow and shift, according to the rise and fall of the economy. The details of this have always had a way of working themselves out to best permanent advantages for those having the know-how and the energy to prosecute their own programs.





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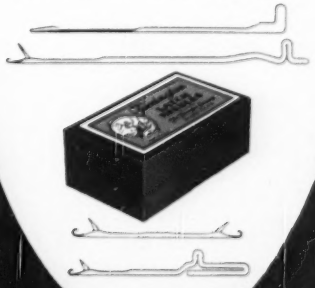
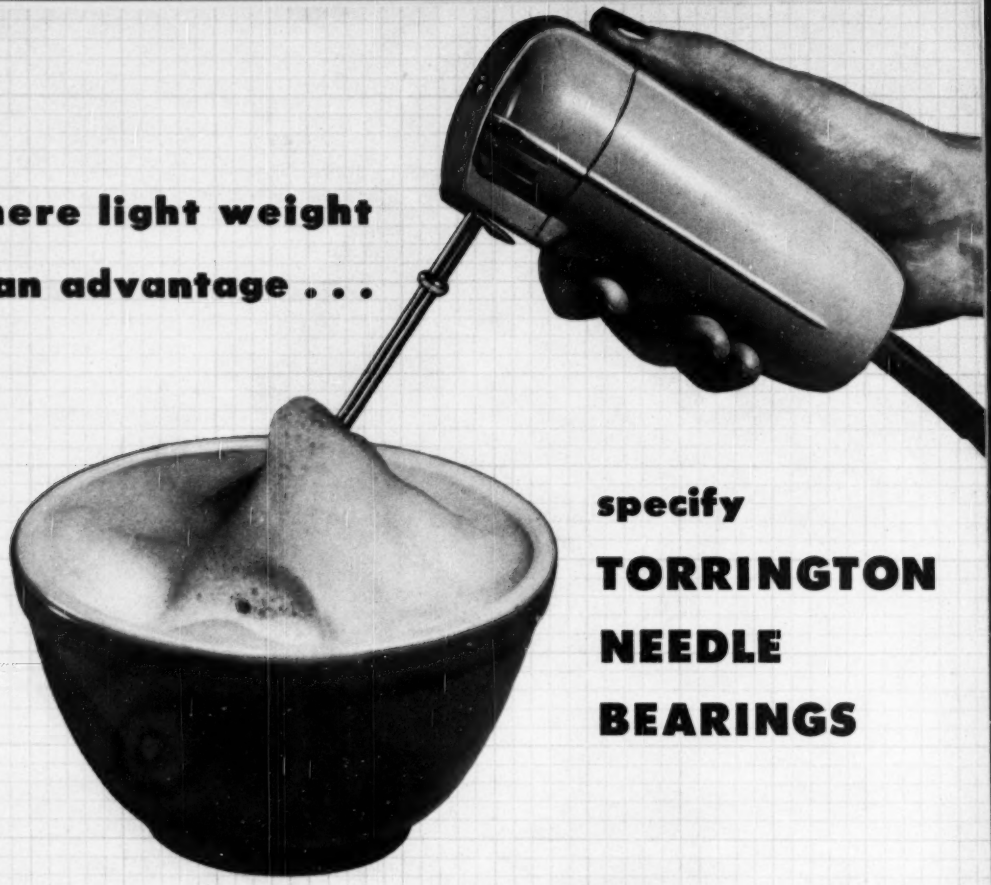


where light weight is an advantage . . .



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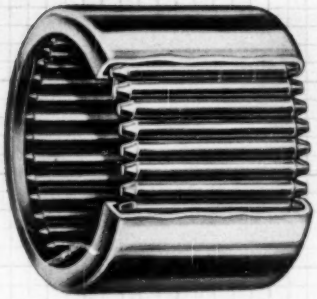

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Knitting Yarn Mills Still "Play Safe"

Over the last several weeks, underwear, outerwear, hosiery and related knitwear lines have covered ahead more liberally, but most yarn sources have not changed their spring of 1950 curtailment programs. The extra business booked during April and May showed no enlargement of spinners' gross margins for profit. Competition prevented this.

Synthetic fibers have continued to make inroads into the yarn supply for knitted items. Cotton knitting yarn supply seems to remain static, thus far. This also can be said as to woolen and worsted knitting yarns. As to silk, little progress is reported.

Knitting yarn spinners have not yet changed their production programs to conform to the new level of consumer buying. The capacity for production is there, when the spinners want to employ it. Last fall, during the buying wave, cotton spinners used only eighty per cent of rated capacity. Part of the new orders were filled out of spinners' stocks that had been carried over from 1948 or later production.

In the present situation, spinners are credited with owning only enough knitting yarn to cover one week's shipments at the current rate. Dealer-owned yarn stocks in the various markets not only are below a year ago, but also are far less than they were on January 1, 1950. Customers' stocks obviously have become sufficiently depleted to induce them to buy ahead more liberally for deliveries up to mid-year, and sometimes beyond that.

Knitting yarn sources are anxious now to bolster their profit margins. They agree that the main thing toward this end is to keep down the "free" supply of yarn, and so they have adhered to their curtailment schemes. Market interests explain that when and if consumer demand remains as effective at mid-year as it has been recently, the reaction in spinners' quotations will be sudden and sharp.

Are Prewar Values Gone Forever?

A competent textile-apparel authority lately advised his clients to "forget the past." It is recalled that after World War I there was widespread desire among business people for a return to "normal." It never happened. The world had changed its standard of values and mankind refused to go back to the heldover concepts remaining from the Nineteenth Century. Likewise, after World War II, business spokesmen often have discussed return to normal on the basis of what was effective in the late 1930's.

It has begun to be realized that again this minor "return" will never happen. It is claimed such thinking lacks soundness. The general public in this and other countries have not forgotten the prices they paid prior to 1939. Their aim is to get comparable goods at such prices. It seems to be generally overlooked that national currencies all over the world now command far less buying power, in terms of merchandise and service, than they did before.

This authority calls attention to the stake which governments now have in keeping in effect a certain amount of inflation. In the United States, for example, our government favors inflation to the extent that it will help this country pay off its huge war and postwar deficits at some time in the distant future. Therefore, it is with our government's sanction and encouragement that the cost of living in the U. S. is now higher than anywhere else in the world.

Despite this condition, which could be changed here by nothing short of an all-out political turnover (deemed very unlikely), the public and its suppliers still occasionally hark back to prewar conditions and pricing. In the belief of the experts, this is simply nostalgic thinking on our part. The economic facts and the financial and business trend are said to be toward greater inflation and higher consumer prices, instead of any return to the "olden times."

Best bet for knitwear and other sources, it is contended, is to frankly state the quality of merchandise offered and insist that it is being made and sold on a strictly business basis, by concerns that occupy an important position and intend to stay in business—and that no real concessions favoring consumers can be hoped for as long as domestic and international conditions remain as they now are.

Ordnance Gauge Develops Two Circular Knitters

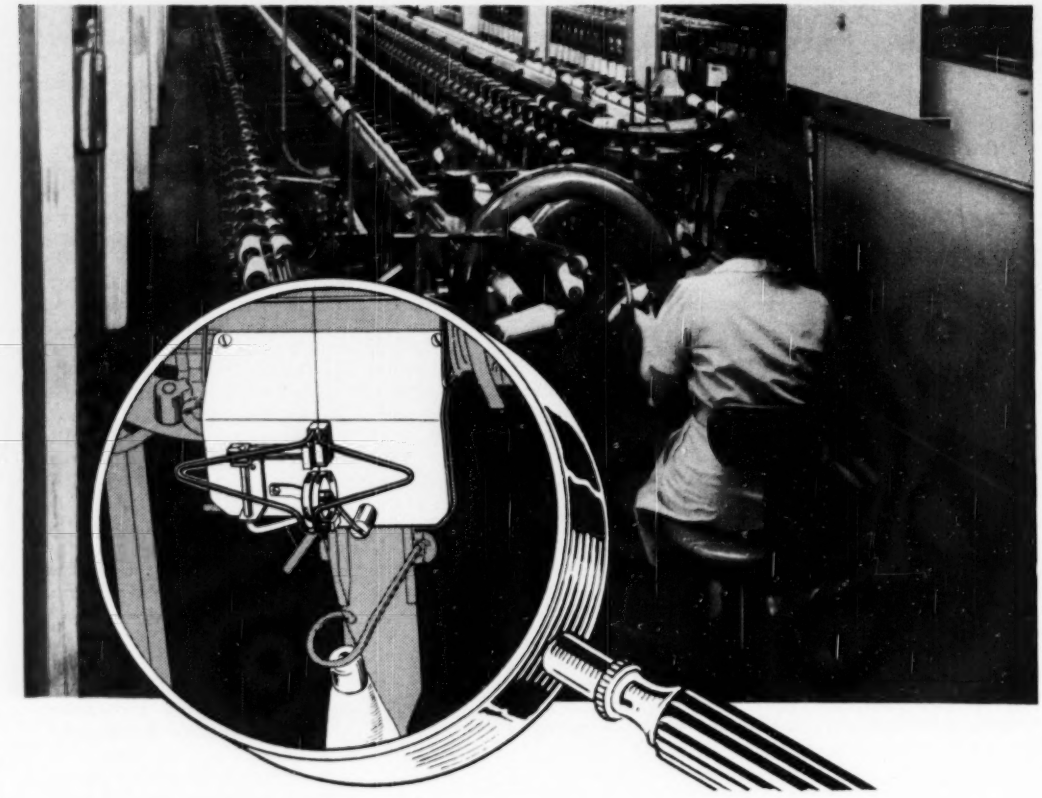
Two recently developed circular knitting machines—the OG, a full automatic seamless circular rib interlock machine, and the OT, a full automatic circular transfer interlock and rib machine—are now being produced in four sizes: 18", 20", 22" and 24", in 8 to 10 cut.

Both machines are fully automatic with 8 feeds on all sizes, and each feed can be thrown in and out of action automatically. Three color steel yarn changers are provided for each feed, and they are controlled by positive means, thus permitting the knitting of various stripes into any part of the body without the necessity of seaming the sides to eliminate striping steps. The striping fingers are also used when throwing in an additional end of yarn.

Single and double ply synthetic yarns, zephyr worsted or cashmere yarns can be readily used.

The type OG, in addition to knitting interlock fabric, will knit plain rib, half cardigan, welt stitch

The NEW Sliding-Block SLUB CATCHER



THE Abbott Machine Company has developed a new type of slub catcher called the "Sliding-Block." This new type slub catcher has been especially designed for Abbott circulating automatic Cone and Tube Winders.

When the machine is in operation, the sliding-block slub catcher on each Winding Unit is opened and blown out automatically after each bobbin is wound, or oftener if necessary.

The sliding-block slub catcher is accurate to 1/1000th of an inch and can be quickly and easily replaced with any desired size. Of great importance is the fact that the slub catcher is foolproof.

The spacing is built into the block in such a manner that it cannot be altered while in operation, nor can it be kept open purposely to increase production at the expense of the quality of the yarn. Mills that have been using this new Abbott sliding-block slub catcher all report that it is an outstanding contribution to the winding field for improving yarn quality.

Write to us now for further information

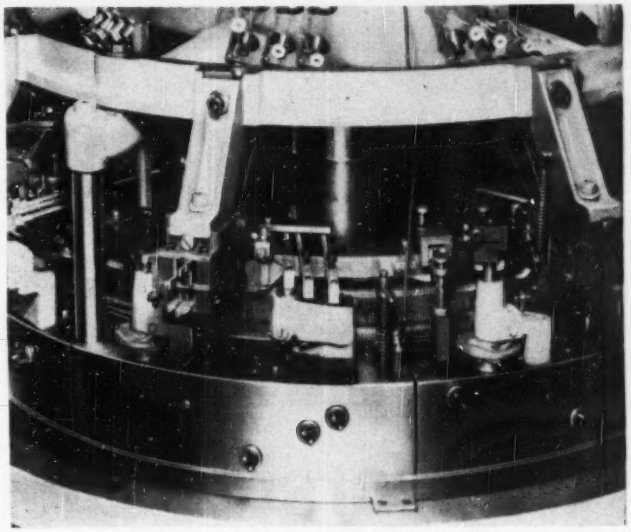
ABBOTT MACHINE COMPANY
FACTORY AND MAIN OFFICE
WILTON, NEW HAMPSHIRE
SOUTHERN OFFICE: GREENVILLE, SOUTH CAROLINA

or pineapple stitches with 2 x 2, 2 x 1 or 1 x 1 rib bottoms.

The type OT, in addition to knitting all fabrics as on the OG, will also transfer from rib to jersey and French welt to jersey; knit interlock or rib bodies with 2 x 1 rib in waist line and shoulder as in Hollywood type ladies coats; bodies of rib and jersey paneling of wide variation with knit on bottoms of 2 x 2, 2 x 1 or 1 x 1 rib, and will also knit collars and trimmings of French welt or tubular knit and transfer to jersey with cotton separation for single stitch looping.

New mechanical features and developments incorporated in the machines include:

1. Single speed motor with positive speed control from high to low speeds for changes.
2. The stitch control mechanism has three positions on both cylinder and dial, is operated by a cam action and is easily adjustable.
3. Timing and control mechanism is positive both ways, thereby eliminating the need for springs.
4. Automatic control chain, consisting of hardened steel jacks screw-clamped in place, is readily adjustable.
5. Dogless construction.



Close-up of knitting elements of Ordnance Gauge Co.'s new machine.

6. Light in center of machine for knitter's convenience.

Ordnance Gauge Co., Frankford and Torresdele Aves., Philadelphia 24, Pennsylvania.

For additional data, request item G-501, using business reply card on page 194.

AN EYE ON THE

KNITTING MILLS

In transferring a considerable part of its equipment from the St. Joseph, Mich., mill to Decatur, Ala., **Cooper, Wells & Co.** has disposed of two buildings of its St. Joseph mill.

A one-story building at 164 Belmont Ave., Belleville, N. J., has been leased by **James C. Van Loon** and **J. P. Hensley,** who will equip it for the manufacture of knit goods. A new company will be organized to operate the plant, headed by Messrs. Van Loon and Hensley.

Alfred J. Fleming, 154 Nassau St., New York, N. Y., is attorney and representative for the newly chartered **Sea-Ray Knitting Mills, Inc.,** which will operate a mill for manufacture of outerwear.

A one story building in Charlotte, N. C., has been acquired by **Doyle Hosiery, Inc.,** to be equipped and occupied for a new mill. John J. Doyle and associates are the organizers of the company.

Nupah Hosiery, Inc., Boyertown, Pa., has been established by Samuel R. Reifsnyder of Boyertown and Thomas P. Connor of Philadelphia, Pa. 66 gauge hosiery will be produced.

Knitted fabrics of various kinds will be manufactured by the newly organized **Carolina Corp.,** Clover, S. C. A bleachery and dye works are included in the plans for this plant.

A contract has been let by **Zwicker Knitting Mills,** Appleton, Wis., for construction of a two-story addition to the plant.

Plans for an $80,000 expansion program, which will double the plant's productive capacity, have been announced by Randolph A. Walker, president of **Dorchester Fabrics, Inc.** Contract has been let for construction of additional space, and new machines have been ordered.

A building formerly used by Athens (Ala.) College has been leased by **Holeproof Hosiery Co.** It will be remodeled and equipped for a new branch mill.

The Wilmington, N. C., branch of **Chadbourn Hosiery Mills, Inc.,** operating under the name of Full Knit Hosiery Mills, has been closed and its operations combined with the branch mill at Burlington, N. C., for increased production capacity.

Vogt Knitting Mills, Inc., of Reading, Pa., has discontinued operation of a branch plant at McMinnville, Tenn. Equipment will be moved to Reading where production will be concentrated and expanded.

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Worsted Lubricant That ELIMINATES STATIC

Application: Top or Pin Drafter

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*T. M. Reg. U. S. Pat. Off.

Retail Trends Are Closely Watched

So far since the end of the war, the knitwear and all other textile-apparel lines, together with many other sorts of non-durable merchandise, have had plenty of competition from such durable productions as autos, television and radio sets, and other major home appliances.

There have been several retail selling booms during the last few years, in durable items. At such times, large retail outlets tended to push "soft goods" more or less into the background. It now is pointed out that promotions of "big ticket" durables for some time have depended mainly on easy credit for success. Lately, it is claimed, "nothing down and years to pay" has lost much of its attraction.

This spring, knitwear and other non-durable manufacturers located in some of the leading centers in this country have operated more consistently than have the mills and factories engaged in the durables field. When and if the merchandise officials of the big durables corporation exhaust their easy-credit lure, it is explained, their remaining resort must be to cheapening their products, so as to reinstate lower-price appeal as a selling aid.

As their name implies, durable household appliances, such as electric refrigerators, laundry apparatus, etc., are expected to last a long while (ten, fifteen or twenty years) before the same customer can be "reloaded." Over the last couple of years it became progressively easier to get high-priced durables on long-time credit. A prominent economist says, in part:

"One important fact must be remembered: A boom in durable goods is much more volatile than a boom in non-durables." Accordingly, some advisers claim, the inventory replacement movement which has been under way lately in manufacturing materials and processed goods in the textile-garment industry may eventually contribute a great deal toward keeping U. S. economy on an even keel.

Eliminate "Shiners"

Through use of Bleached Glycerine Softener CUK, losses from shiners in full-fashioned knitting are said to be eliminated. The product is especially recommended for 60-gauge knitting machines. In operational use, only one solution is needed in the knitting troughs, according to the manufacturer.

The overall action of this single solution softens nylon sizing evenly, leaving the yarn more pliable for knitting with proper tension.

The product also keeps needles and carrier tubes free of nylon sizing.

Effective for shiner removal with either mono- or multi-filament nylon yarn, Softener CUK may be blended with the com-

Established 1838

TRADE MARK
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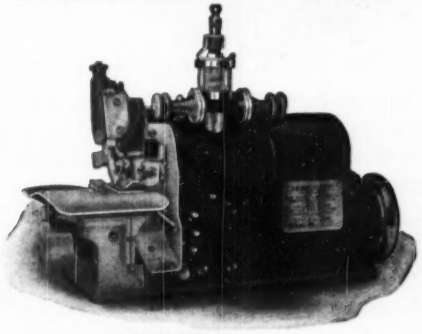
HIGH SPEED OVEREDGING, OVERSEAMING AND HEMMING MACHINES
FOR USE ON
Knitted and Woven Wear of All Kinds



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Highest Quality Mercerized Yarns

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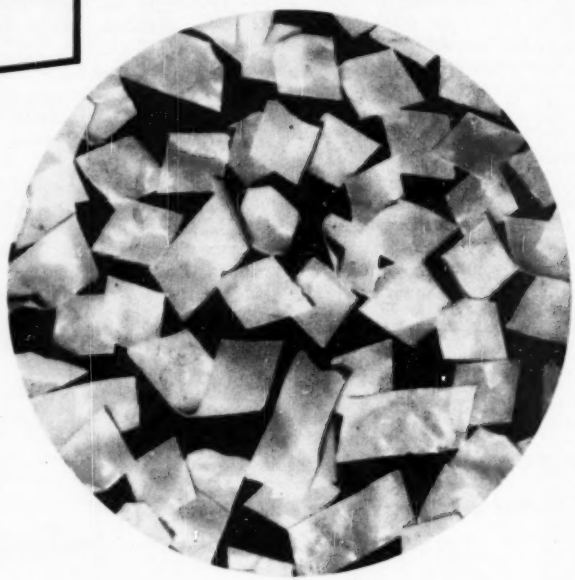
Here is a **finishing agent** which will meet—or exceed—your most rigid specifications. A 100% active product in **flake form,** Profine has an unusually wide range of application. → →



As a medium for imparting softness or body to yarns and fabrics, Profine is a star performer. Self-emulsifiable, its emulsions are unusually stable. It has no effect on shade or fastness to light...no tendency to form objectionable odors or discoloration.

Profine has already proved its superiority in preparing cotton and rayon yarns for the many subsequent weaving and knitting operations. Its ability to soften these fibers and impart a pleasing hand to fabrics has already resulted in its adoption for many processing operations.

For example, to soften cotton knit underwear material and cotton broadcloth . . . to reduce the danger of water spotting on acetate lining materials . . . to reduce "dusting off" of the starch in back-filling cotton fabrics . . . to give body and drape to spun rayons.

Profine has already demonstrated its ability to up-grade fabrics. You can rely upon it to increase the saleability of your fabrics. A month's trial will prove it.

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TEXTILE DETERGENTS AND FINISHES
SALES DEPARTMENT, CINCINNATI 1, OHIO

pany's Needle Oil NE, if desired, for further lubrication of needles and tubes.

O. F. Zurn Company, Philadelphia 32, Pa.

For additional data, request item G-402, using business reply card on page 194.

New Chainstitch Machine

The Type 1201 flat bed chainstitch machine is a radical departure from the conventional type of chainstitch machines, according to the manufacturer. It is designed for high-speed seaming or hemming of neckwear, sewing facings and bindings on knit underwear, and for sewing labels on dresses, shirts, neckwear and undergarments.

The new machine is a single-thread chainstitch with automatic lubrication. Work space under the arm has been increased more than 50 per cent.

A new type of tensioning device measures and mechanically pulls off from the cone the exact amount of thread required for each stitch.

This machine is also equipped with the new type of internal belt drive, made of a special composition re-inforced throughout with cord. It is said to be virtually impervious to oil or other substances, and rarely, if ever, needs replacement.

U. S. Standard Stitch Type 101 is produced.

Willcox & Gibbs Sewing Machine Co., 214 West 39th St., New York 18, N. Y.

For additional data, request item G-401, using business reply card on page 194.

Method for Solving Needle Heat Problem

In instances where nylon fabric is being sewn with cotton and nylon thread, or where needle heat is a factor in fusing nylon thread, the heat problem can be overcome by the application of the following solution to the thread by means of an oil wick on the sewing machine, according to a recent announcement.

The oil wick is placed on the sewing machine so that the thread contacts the wick after it has passed through the tensions. No oil, water or other solutions should be applied to the thread prior to the thread passing through the tension, if the best results are to be obtained.

Solution for Nylon Sewing

Diglycol Laurate S	0.4%
Trigamine	0.2%
Water	99.4%

It is suggested that the felt pad be removed from the wick and that a piece of cellulose sponge be substituted for the felt pad.

Glyco Products Company, Inc., 26 Court Street, Brooklyn 2, N. Y.

For additional data, request item G-503, using business reply card on page 194.

Knitting and Warp Yarn
4's to 30's
AVONDALE MILLS
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Excellent for Soaping Vats—not affected by hard water.
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● Clinton Textile Starches are scientifically manufactured and guaranteed for unvarying uniformity. Clinton Starches give your warp the necessary body, strength and pliability that means quality weaving every time. Reduce loom stoppage and increase production with Clinton Textile Starches. For years Clinton has been a leader in the production of starches for all textile purposes.

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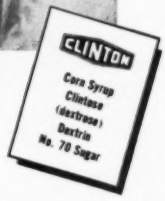
Remember that you can always *depend* upon Clinton's uniform quality and uniform performance.



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Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

Figuring Blows Per Inch On Picker Beaters

EDITOR TEXTILE INDUSTRIES:

Recently it became necessary for us to calculate the blows per inch, or beats per inch, which the stock received in passing through our pickers. We checked several authorities on this subject, and although there was general agreement among them as to the method of figuring the beats per inch, we were not entirely satisfied, so we decided to investigate this matter still further.

We are using a one-process picker, the breaker section having a 2-blade beater and variable speed feed rolls controlled by the mechanism in the reserve box located between the breaker section and the finisher section. The finisher section has a 3-blade carding beater, fed by an evener roll and driven through the evener cones. It is quite evident that since the variable speed feed rolls and the evener roll present the sheet of cotton to the beaters at a varying rate of delivery, each inch of stock cannot receive exactly the same number of blows. Therefore, any figure that we obtain will be an average, and it is common practice to base such results on the average speed of the feed rolls and/or evener roll.

It was our first thought that if we knew the time required to produce a lap, the length of the lap, and the speeds of the beaters, it would be a relatively simple matter to calculate the beats per inch. We therefore assembled the accompany data (see sketch):

Speed of beater (B) 1240 rpm
Speed of beater (D) 1010 rpm
Length of lap (E) 52.40 yards
Running time of lap (E) 7.1 min., or yards per min. 7.38.

The beats per inch were calculated as follows:

(a) $\frac{1240 \times 2}{7.38 \times 36}$ equals 9.33 beats per inch at the 2-blade beater;

(b) $\frac{1010 \times 2^*}{7.38 \times 36}$ equals 7.60 beats per inch at the 3-blade beater;

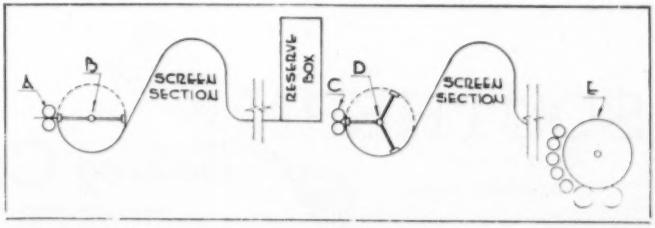
(c) 9.33 plus 7.60 equals 16.93, total beats per inch.

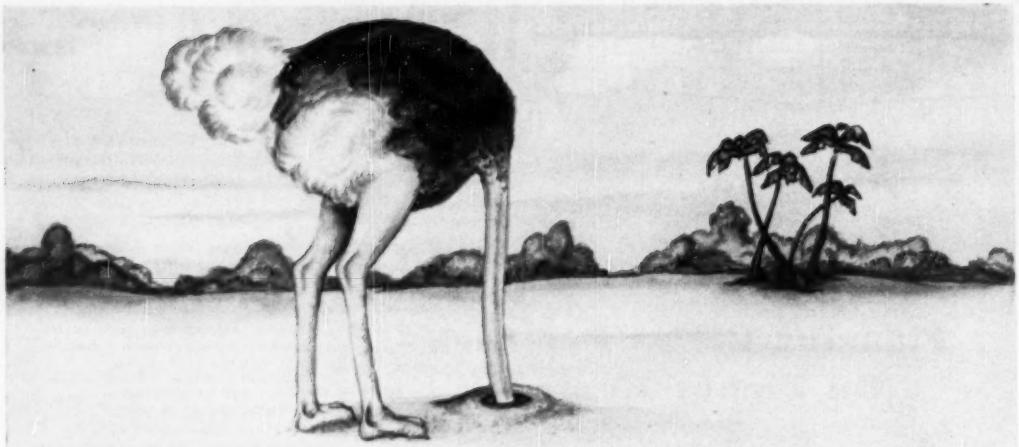
Now let us look at this problem from another angle. The beats or blows are delivered by the beaters on the fringe of stock passing between the delivery rolls and between the evener roll and the evener pedals. The stock may be relatively thick or thin at these points, depending upon the draft of the picker, but as the cleaning action takes place at these points, the blows per inch must also be calculated at these points and must be based upon the rate of delivery of the stock into each beater chamber.

On some pickers there is a progressive draft between each beater and between the final beater and lap rolls; therefore the stock would be thicker at the first beater than at the second, and thicker at the second beater than at the third beater (on a picker with three beaters). The sheet of fibers is thinnest when finally delivered to the lap rolls. The beats per inch would therefore be greater when calculated at the points of delivery to the beaters than when figured on the stock when delivered to the lap rolls.

We have stated that on some pickers there is a progressive draft from the point at which the stock enters the machine to the finished lap. This is not true in

*Many authorities agree that the cleaning efficiency of a 3-blade carding beater is no greater than that of a regular 2-blade beater, so we are following this line of reasoning in our calculations. Perhaps some experiments should be made to determine whether this premise is correct.





WHO'S BEING FOOLED?

Pity the poor ostrich, for he's fooling no one but himself. Neither are those manufacturers who claim their products are "just as good," but much cheaper, fooling anyone but themselves.

As for flat leather belting, *it can't be done!* It is not possible to produce a low-priced belt that is "just as good" in quality, performance and wear. There are no short cuts to the production of GOOD belting.

Modern drives demand modern, long-wearing, efficiently functioning belting. There's only one way to produce quality belting that will meet these demands. It's the "Southern" way, through the utilization of the finest raw materials, up-to-date manufacturing methods, equipment and quality control systems.

Our sales staff will show you the difference between top quality "Southern" belting and "just as good" belting. It only takes a few minutes, but will effect great savings by providing trouble-free, efficient operation of your equipment.

SOUTHERN Belting COMPANY

Quality is an old "SOUTHERN" Custom

236 FORSYTH STREET, S. W. ATLANTA 2, GEORGIA

the case of the picker shown in the accompanying sketch. On this picker the stock is relatively thin when fed to the 2-blade breaker beater by the feed rolls and is traveling at the rate of 126 inches per minute. After passing the beater and the screen section, the stock goes into the reserve box from which it is fed by the evener roll to the finisher beater at the rate of 80 inches per minute. It is thicker at this point, and the principal draft of the machine takes place between the finisher beater and the lap rolls. The assembled data on this picker are as follows:

Breaker Section

Beater, 2-blade
Speed of beater, 1240 rpm
Diameter of feed rolls, 2½"
Speed of feed rolls (average), 16 rpm
Rate of delivery, 126 inches per minute, calculated as follows:
2½" x 3.1416 x 16 rpm equals 126 inches per minute
Beats per inch should be figured thus:

$$\frac{1240 \times 2}{126''} = 19.68 \text{ beats per inch.}$$

Finisher Section

Beater, 3-blade, carding
Speed of beater, 1010 rpm
Diameter of evener roll, 3 inches
Speed of evener roll (average), 8.5 rpm
Rate of delivery, 80 inches per minute, calculated as follows:
3" x 3.1416 x 8.5 rpm equals 80 inches per minute
Beats per inch would be figured thus:

$$\frac{1010 \times 2^{**}}{80''} = 25.25 \text{ beats per inch}$$

Total number of beats per inch, 19.68 plus 25.25 equals 44.93

We thus have 44.93 beats per inch instead of only 16.93 as was apparent from the results obtained previously.

Now for the $64 questions: Is the best work (cleaning, etc.) performed on a relatively thin sheet of stock or on a thick sheet? What is considered the optimum number of beats per inch to secure maximum cleanliness with the least amount of damage to the fibers? Although we have not discussed fan speeds in this article, we would like to ask this question: What effect, if any, does the speed of the fans have on the trash and other impurities from the stock? In other words, are high or low fan speeds preferable?

It is our hope that a number of good carders will come back at us with some informative discussions on the points raised in this letter.

CONTRIBUTOR No. 8229

****See note with first problem given in this article.**

Causes of Mildew on Packaged Yarn

Subject Briefed: *We are having trouble with mildew forming on our undyed yarn in the storage warehouse. The bottom layer of yarn in the case is the one which is mildewed. The box is not damp and the floor is dry. Also, there is no mildew on the outside of the wrapped package; just on the yarn.* (CONTRIBUTOR No. 8213, *April*, 1950.)

EDITOR TEXTILE INDUSTRIES:

Mildew is caused by excess moisture in addition to other factors. Cotton yarn with a regain of less than 8% will not mildew when stored in a dry place. Assuming there is no excess moisture in the yarn when packed, the chances are that the dry concrete floor is wet. I would suggest that the correspondent place two or three one-inch boards between the concrete floor and his cases.

CONTRIBUTOR No. 8218

◆

EDITOR TEXTILE INDUSTRIES:

The mildewing trouble which your CONTRIBUTOR No. 8213 is having looks to me as if without

Kink Contest

$ $ Your Idea May Win $100 $ $

This contest ends July 15, 1950

ONE HUNDRED DOLLARS will be awarded for the most helpful short cut, kink, time-saving device, cost-cutting suggestion, or quality improvement idea submitted by July 15.

Contributions eligible for the prize must not have appeared elsewhere and must not be sent to any other publication.

All material will be paid for at regular space rates upon acceptance irrespective of the contest winner. Advise when submitting entry if participant's name may be used. Only one award will be made in each contest.

Participants are not restricted as to number of items submitted to compete in the contest. Each entry should be described in sufficient detail to make it easily understood, and where possible, glossy photographs or pencil sketches should be included. Finished drawings are not necessary.

All entries for this contest must be postmarked not later than midnight, July 15, 1950. Address: Editor "Textile Industries," 806 Peachtree Street, N. E., Atlanta 5, Georgia.

SPRINGS EQUIPS WITH H & B SUPER DRAFT

New H & B Frames Now Being Installed

H & B's new Super High-Draft Spinning System, first announced in February of this year, is now being installed in the Lancaster plant of the Springs Cotton Mills.

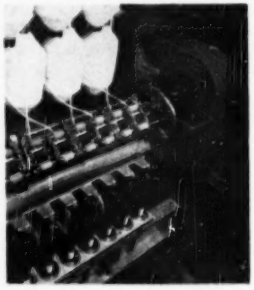
Colonel Elliott White Springs disclosed the delivery of a substantial number of frames in a 60,000 spindle order. An additional number of existing spindles will also be changed over to the new super draft system.

Excellent results have already been obtained in spinning 30's yarn from a .60 hank roving with a draft of 50, using run-of-the-market, bright, strict low middling, 1 1/16" cotton

AERIAL VIEW of Springs Mills Lancaster plant where 148 new H & B Super High-Draft frames are now being installed in a new six-story addition.

High Drafts Give Quality Yarn At H & B Exhibit

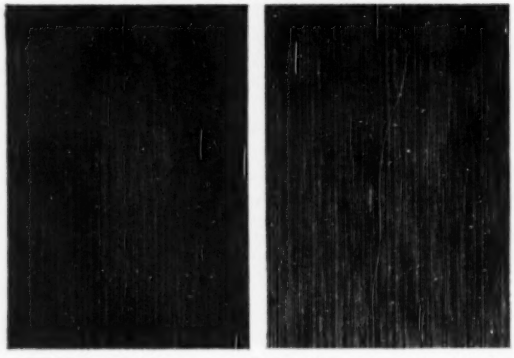
Visitors at the American Textile Machinery Exhibition at Atlantic City were given actual proof of the capabilities of the H & B Casablancas Super High-Draft System. In running demonstrations 30's yarn was produced from a .75 hank roving single using 1 1/16" Acala cotton and accomplishing a draft of 40.



H & B CASABLANCAS Super High-Draft System as shown at Atlantic City.

H & B considers this demonstration and the Springs Mills installation as conclusive proof that its new system is the most outstanding on the market today.

QUALITY — STRENGTH — ECONOMY IN HIGH DRAFT SPINNING WITH NEW H & B SYSTEM



PICTURE, at left shows SPRINGMAID yarn with a draft of 50. At right is yarn with a draft of 18. The same drawing sliver was used.

SPRINGS LAB PROOF OF TYPICAL BREAKS 30's YARN — DRAFT OF 50

Yarn Count	Strength Skein (Lbs.)	Break Factor
31.2	87	2714
31.3	85	2661
31.0	86	2666
30.5	88	2684
30.8	85	2618
31.5	83	2615
30.9	88	2719
30.4	89	2706
30.2	89	2688
30.0	86	2580
30.0	87	2610
30.6	83	2540
29.2	99	2891
30.8	89	2741
30.3	91	2757
28.9	89	2572
Av. 30.5	87.8	2677

Average Skein strength (in pounds) corrected to 30's yarn — 89.6

By Formula —

$$S2 \text{ equals } C1S1 - \frac{(C2-C1)\ 21.7}{C2}$$

Standard Laboratory conditions 65% relative humidity at 74 degrees F dry bulb temperature. Roving: Lancaster Plant regular .60 slubber. Cotton: Regular Lancaster mix BSL, 1-1/16 average.

Builders of MODERN TEXTILE MACHINERY

H&B AMERICAN MACHINE CO.

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BRANCH OFFICES: Atlanta, Ga. 815 Citizens and Southern National Bank Bldg.; Charlotte, N.C. 1201 Johnston Bldg.

any question he is simply leaving an excessive amount of moisture in his yarn from his steaming room. He is not allowing this yarn enough time to dry out sufficiently before he wraps it in paper. By wrapping the yarn up after only five hours allowance for proper penetration and drying out of the moisture, he is keeping too much moisture in each package, and this is causing the mildew.

CONTRIBUTOR No. 8219

◆

EDITOR TEXTILE INDUSTRIES:

It is very difficult to get mildew growth on yarns with moisture contents under 9%. Apparently the bottom layer of yarn in the cases must be sweating, possibly from the case being in contact with the concrete floor. In a hot warehouse with a little excess moisture in the yarn, mildew growth would occur. By circulating air under the cases some of the trouble may be prevented.

I see no apparent way that a fungicide could be applied to the yarn in that a steam well is used.

CONTRIBUTOR No. 8220

Flat Washer Simplifies Removal of Drafting Roll Covers

EDITOR TEXTILE INDUSTRIES:

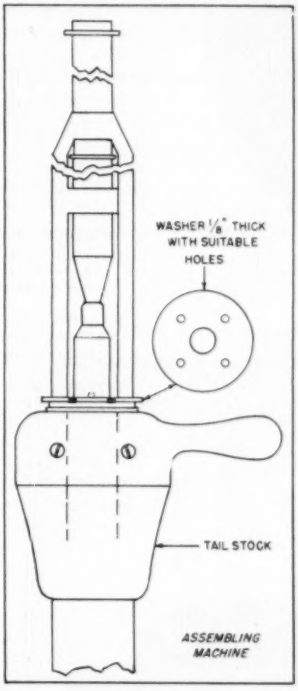
In recovering rolls with cork or rubber it is usually necessary to take a knife and cut the cover off or boil it loose from the metal. This procedure is time consuming, laborious, and hazardous. Occasionally it is necessary to take time out to sharpen the knife or to have a cut treated.

I asked several persons in other plants how they removed the old covers and found that they used the same old procedure. In an effort to find a better way to remove the old covers, I experimented and found that a flat washer serves well in pressing the cover off on a roll assembly machine. The job that formerly required most of a day now can be done in less than an hour, and the rolls can be recovered and buffed on the same day.

The accompanying sketch shows the type of washer used and where it fits on the roll assembly machine. The washer I used came from a roving frame. It was formerly on the bottom cover for the spindle gear. Four holes had to be drilled in the washer to match the set screws on the jaws in the headstock. A different size hole is needed in each washer for each type of roll being stripped.

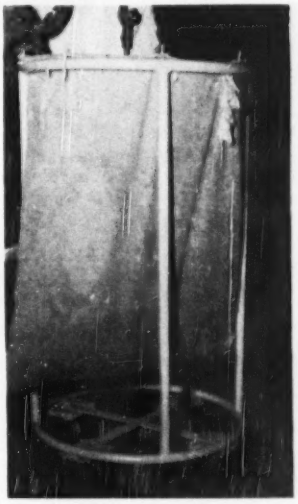
CONTRIBUTOR No. 8284

A washer 1/8" thick with suitable holes can be inserted into the regular roll assembly machine to press off old roll covers. Several flat washers, having different size holes, may be kept on hand to accommodate rolls of different diameters. The washer is placed on the tailstock.



Movable Holder for Waste Bag

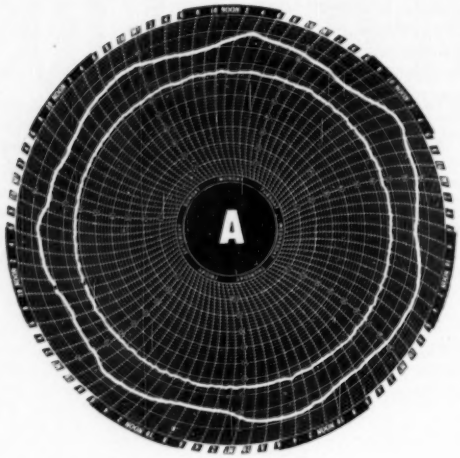
The waste bag on wheels shown in the accompanying photograph is in general use in Calhoun Mills, Calhoun Falls, S. C. The superintendent, J. C. Godfrey, has found that it saves a lot of time and makes a hard job easier.



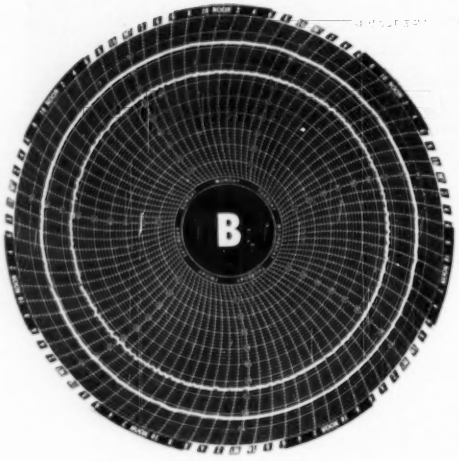
Waste bag on wheels.

The frame is made of small pipe, welded at the joints, and can be made any convenient size to fit the waste bags used. The frame is mounted on casters so that it may be easily moved from place to place.

Instead of carrying waste to the old waste box, which later had to be dumped into a bag and carried to the waste room, the movable frame and bag are readily moved about as needed in the areas in which waste is produced. When the bag is full, an employee removes it from the frame and replaces it with an empty bag. Once a day the waste house man makes a trip through the mill and collects all of the ready-bagged waste and carries it to the waste



which?



EVAPORATIVE COOLING? Or complete air conditioning? Which is best for your mill?

Look at the charts. They recorded temperature and humidity during a typical week in two textile mills. Chart A shows conditions with evaporative cooling. Chart B shows conditions with complete air conditioning. In both charts the pen has traced a nearly perfect circle at 65% relative humidity.

But the temperature line for Chart A has varied as the outdoor conditions changed while the line for Chart B has been held steadily at the proper temperature regardless of outdoor conditions . . . constant, correct temperature hour after hour, day after day.

What will this mean in your mill?

SPINNING — Complete Carrier Air Conditioning will permit higher spindle speeds with fewer ends down, increase labor efficiency and reduce fiber variations.

TWISTING — Evaporative cooling is at a disadvantage because the humidity requirements of synthetic fibers range from a low of 55% to a high of 65% . . . and adequate cooling cannot be had by evaporative means at low relative humidities.

WEAVING — High-speed automatic looms are sensitive to changes in temperature. Complete Carrier Air Conditioning reduces loom stops, seconds, and loom fixing.

KNITTING — You want maximum firsts with maximum production. The evidence shows that greater damage is caused by uncontrolled cooling than by uncontrolled humidity.

Sure, this is general. In many cases evaporative cooling will give the best results on a cost basis. In others, complete air conditioning will be the most economic solution. But in either case, you can count on Carrier for the kind of air conditioning that is right for your mill. Carrier Corporation, Syracuse, New York.

Carrier

AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

room or waste house.

At Calhoun Mills the frame is painted to blend with the colors used on other such equipment throughout the mill.

Discussion on Boxing Shuttles

Question Briefed: *When running a large shuttle and quill, we find that we have considerable trouble in adjusting the box on the loom to keep the shuttle boxing properly.*

We are running an 8¾-inch bobbin, Columbian type shuttle, E-Model loom, and 5s to 14s filling yarn.

We should greatly appreciate any assistance that the readers of TEXTILE INDUSTRIES *may offer.* (CONTRIBUTOR No. 8105, *October*, 1948.)

EDITOR TEXTILE INDUSTRIES:

To begin, we are assuming the loom is in good repair and tight as well as the pick motion set and timed correctly.

We would start to box the shuttles as follows:

Check protector motion to be sure both daggers are striking the frogs at the same time. The protector rod fingers should be set with the shuttle going into the box so the daggers will clear the frog steel. When the knurl of the shuttle is six inches from the picker and the stick is all the way in the box, the daggers should be raised 5/8" off the frog. This gives approximately ¼" clearance of the steel.

Be sure that when shuttles are all the way in the box that the protector fingers are not binding. Put enough spring on the protector rod to hold the daggers down in the event the loom slams. Care should be taken not to put more spring than is needed. Some people use too much spring on the wooden binders. Only use enough here to push the binders in and hold them when the shuttle leaves the box.

Check the straps; they have a definite bearing on shuttle boxing. They should be put on with the check strap board ⅔ way to the front. Then with shuttle all the way in the box, there should be ¼" clearance between picker stick and the inside of the strap.

When the foregoing instructions have been carried out, the shuttle should be placed in the boxes, the binders adjusted, and box studs tightened. Raise the lugs as high as practical. Try to run the box as slack as possible.

Not knowing the width and speed of the loom, it would be difficult to give more definite suggestions.

CONTRIBUTOR No. 8117

◆

EDITOR TEXTILE INDUSTRIES:

In answer to the question by CONTRIBUTOR No. 8105, we are offering the following suggestions for what they are worth. In answering questions of this type, I am aware of the fact that many things have to be assumed, since we have no knowledge of all factors involved.

If CONTRIBUTOR No. 8105 is attempting to run a large shuttle and quill without changing lay ends on his Model E looms, I am of the opinion he need seek no further remedy of his trouble.

If for any reason he has increased speed of his looms or installed the lay ends for this large shuttle and is still trying to run with the conventional check strap, his trouble may be remedied by changing to another check strap.

Also, he should check the back binder and see if it is straight or concave. A flat or straight back binder is difficult to operate under these conditions.

We hope these suggestions may be of some value.

CONTRIBUTOR No. 8118

Slack Filling Holder for Looms

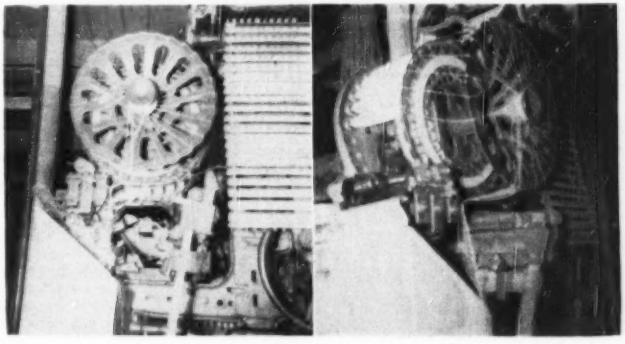
This item was an entry in a recent kink contest.

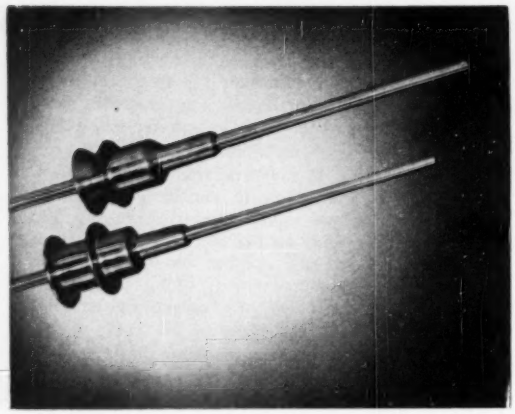
EDITOR TEXTILE INDUSTRIES:

A slack filling holder placed underneath the batteries on Draper looms reduces filling breaks and helps increase production. A filling holder device was developed in our mill, and it is composed of a simple casting with two set screws and a 3/16" wire, bent in an arc with a kink near the casting. As shown in the accompanying illustrations, the casting fits on the transfer stud, and the 3/16" wire passes underneath the threads from the bobbins already in the battery. The set screws serve to fasten the casting to the transfer stud; and the wire to the casting.

The small kink in the wire near

Close-ups of loom equipped with the filling holding device.





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CF&I

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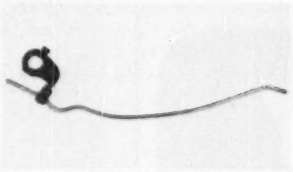
the casting is where the filling falls as the battery rotates after the bobbin is doffed, thereby bringing all of the broken threads into one position. This makes it easy for the battery filler to break off the loose threads from the end of the battery.

Some advantageous features of the filling holder are as follows:

1. The wire guide holds the filling and prevents it from falling on the box or picker, thereby keeping the filling from being broken.

2. Holder prevents filling being too loose which would permit the draft to pull the filling out of position during doffing. The holder stops filling breaks on the doff.



Slack filling holder.

3. Broken threads cannot dangle and cause trouble by becoming entangled in the lay end, picker, and other loom parts.

4. Once the holder is placed in position, it requires no further fixing and does not wear out.

CONTRIBUTOR No. 8280

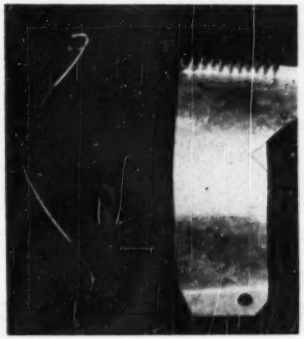
Device Prevents Laps on Spoolers

This item was submitted in a kink contest.

EDITOR TEXTILE INDUSTRIES:

At one time the biggest problem in our spooler department was to keep the drums free from yarn laps. Laps caused several spooler stops each day, and drum bearings had to be replaced because of this trouble. Our problem has been solved by a device which catches the yarn before a lap starts forming between the drums.

Two views of the part used to prevent yarn laps. Sometimes the parts cannot be mounted as shown here, but they can be bent over the bearing after being fastened to the latch screw. Part shown at left has a notch to show that some slight modifications may be necessary to adapt the device to any make of drum.

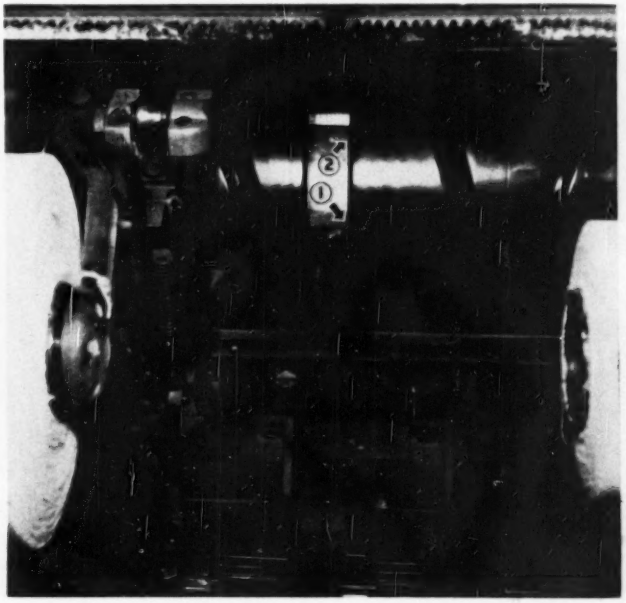


In making the device, I started with a piece of heavy gauge tin 6" long and 2½" wide. The corners at one end were trimmed slightly, and a ¼" hole was drilled at this end to permit fastening the device to the bearing latch screw. At the top of the tin I made 11 cuts ⅛" apart and ¼" long. Each of the cut portions were twisted 45 degrees to form teeth (see photo).

On the right side a cut was made 1½" from top and ¾" back all the way to the bottom of the piece so it would fit around the bearing oil stem. After cutting into the desired shape I bent the piece into a half circle and fastened it above the drum bearing on the spooler. The cutaway side of the part was placed to fit around the oil stem. The latch screw holds the part in place securely and when the top portion is close to the left drum end, the teeth make an excellent lap barrier.

Our spoolers are now equipped with these improvised parts, and we are not bothered any more with yarn laps. Maintenance costs have, decreased some in that

Arrow No. 1 shows location of latch screw which holds the device in place on the spooler. Arrow No. 2 points to location where the rim of the drum has the right wing of the part hidden. The bearing oil spout is also near the end of this arrow.



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GASTONIA, NORTH CAROLINA
A SHEET METAL WORKS SERVING TEXTILE MILLS

the cost of tin and installation of the device is estimated at about 30 cents, and we have been saving bearing replacements and lost time for repairs and cutting out laps. Changing a bearing usually required about 1½ hours.

With some slight modifications, the device can be adapted easily for any make of drum bearing casing. Each type of bearing casing has a different oil spout, so it is necessary to consider the details in tailoring the part.

CONTRIBUTOR No. 8275

Vacuum Stripper Traverse Tube Clearer

This item was an entry in a recent kink contest.

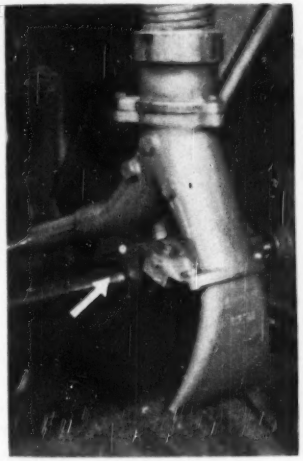
EDITOR TEXTILE INDUSTRIES:

I have made a device known as the traverse tube clearer which operates in conjunction with the carriage of the Abington vacuum card stripper. The assembly is attached to the carriage of the vacuum stripper.

Cards usually produce a large amount of waste and lint which accumulates at various locations, including the vacuum stripper. When the card stripper begins his stripping operation, usually he does not clean the traverse tube. In a short time the traverse tube is covered with waste, and the carriage of the stripper becomes packed with waste fibers which cause it to bind on both strokes of the traverse. Excessive friction and binding causes the pawl or dog to break, and the card fixer must take the stripper apart frequently in replacing broken pawls.

Replacing broken parts in the stripper not only takes the fixer away from other duties, but the card stripper also loses a lot of time on his job. The card stripper is at fault because if he had cleaned the traverse tube before he began stripping, the pawl would not have broken. The traverse tube clearer does away with the necessity for the card stripper to clean the stripper mechanism. My clearer (patent applied for) automatically cleans all lint and waste off the traverse tube, thereby preventing waste from entering the carriage.

The clearer is composed of two metal parts which hold a circular brush. The brush is made of hard bristles, designed to fit the traverse tube of the stripper. The



Arrow points to clearer attached to vacuum stripper.

clearer is installed in front of the stripper carriage, and the outside bolt of the carriage holds the adjusting bracket. By tapping the carriage with a ¼" x ⅜" cap screw, the short lug of the clearer can be fastened with a bolt.

The automatic clearer brushes off all waste and lint which accumulates on the traverse tube ahead of the carriage as the stripping operation begins. When the stripper carriage gets full of waste, the stripper tube binds on the shaft and resists movement so that the pawl cuts a deep groove into the traverse shaft of the stripper. The card fixer has to take the apparatus apart every time a breakdown occurs, thereby causing a loss in production in addition to costly repairs.

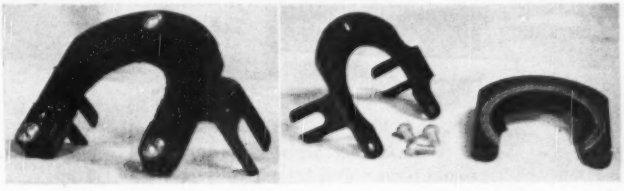
The traverse tube clearer eliminates much of the trouble caused by congested waste. Repairs are reduced to a minimum, and the grinder can devote his time to more important work. The work produced is cleaner, stripping is trouble free, and production shows a corresponding increase. The accompanying photos show the component parts and the clearer mounted on the card.

The traverse tube clearer keeps lint deposits off the traverse tube effectively, and the card stripper is not bothered with the added task of keeping the tube clean, which delays his job.

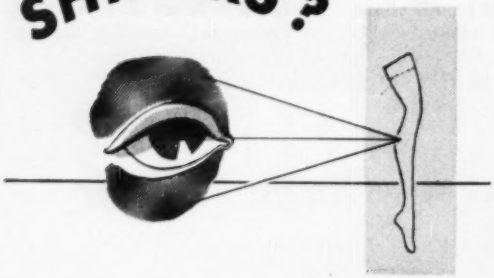
Less maintenance is necessary with this installation on the card because waste fibers no longer bind the traverse motion to cause broken pawls.

CONTRIBUTOR No. 8286

Left, the entire clearer assembly. Right, the traverse tube clearer device disassembled.



SHINERS?



not in your hosiery when you use

Zurn BLEACHED GLYCERINE SOFTENER CUK

"Shiners" are *out* when Bleached Glycerine Softener CUK goes into your 60 gauge full-fashioned machines. This one solution softens nylon sizing evenly, makes yarn more pliable for proper tension knitting. Bleached Glycerine Softener CUK may be combined with Needle Oil NE for superior needle and carrier tube lubrication. Needles and tubes are kept free of nylon size so that tube life is increased.

CUK Bleached Glycerine Softener is recommended by Textile Machine Works for all nylon knitting on full-fashioned machines.

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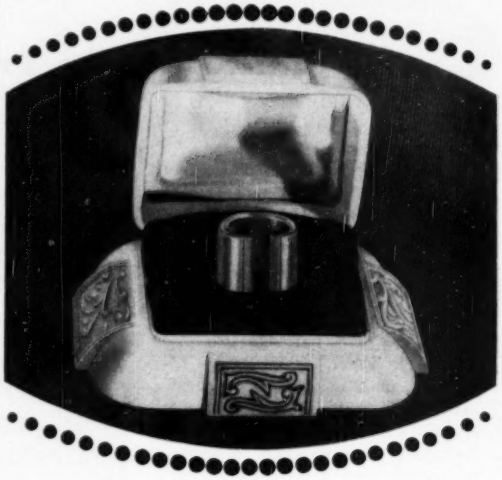

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From chemical analysis of raw materials to microscopic examination of the finished product—the *quality* of CARTER TRAVELERS is *scientifically controlled.*

Two trained, experienced metallurgists working in a modern, completely equipped laboratory are playing an important part in producing a traveler absolutely uniform in weight, temper and shape. They are working for you in terms of smooth running work, long trouble-free performance and less wear on expensive rings.

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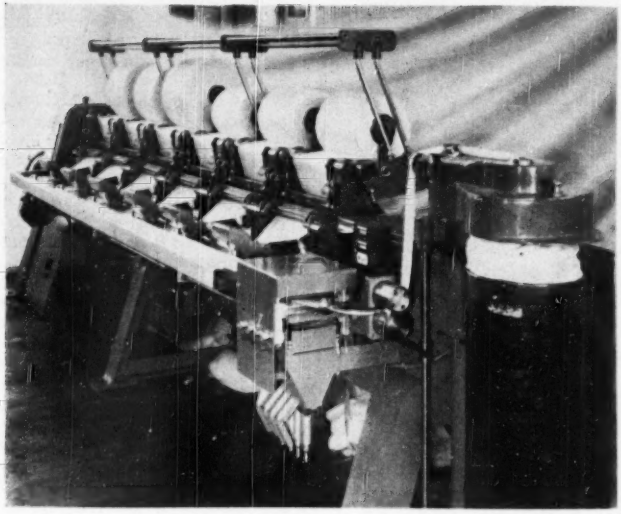
NEW EQUIPMENT
AND MATERIALS



The "Termacomber" has a production capacity of 36 to 40 lb/hr.

Comber Manufactured by Terrell Machine Co.

A comber that will produce from 36 to 40 pounds of combed sliver per hour has been placed on the market. Designated the Termacomber, it runs six laps 12 inches wide, weighing 1350 grains per yard, and can be adjusted to deliver from 6 to 25% waste.

Special features claimed for the machine are as follows:

1. Simplified design reduces maintenance and makes settings rapid and easy to make.

2. Sealed ball bearings at critical points.

3. Automatic can changer reduces down time and attention required by operator.

4. New principle of detaching produces better piece-up and sliver evenness.

5. Draw box weighting and adjusting features permit rapid and accurate roll settings.

6. Adequate change gears provide great flexibility for pan, table and coiler tensions and for varying draft settings.

7. Gear boxes are splash lubricated and completely enclosed.

Aspirator type waste system is employed. One 3 hp motor drives main machine and blower. 1/10 hp motor operates automatic can changer.

Terrell Machine Co., 3000 South Boulevard, Charlotte, N. C.

For additional data, request item G-308, using business reply card on page 194.

Multiple Shuttle Narrow Fabric Loom

A new multiple shuttle narrow fabric loom is so designed that it can be built in varying lengths and spacings, with a single deck circular shuttle, single or double deck straight shuttle, straight shuttle 2-bank crossshot, or single deck 2-bank drop shuttle lay.

The harness motion may be either end cam, end cam with dobby, dobby only, Knowles head, or Jacquard.

It may have varying types of letoff to suit varying requirements.

The take-up may be multiple ratchet or change ratchet, with wood take-up roll, differential geared drums, slip spools driven by gears or cords, web to be delivered in front or back on take-up roll or drums.

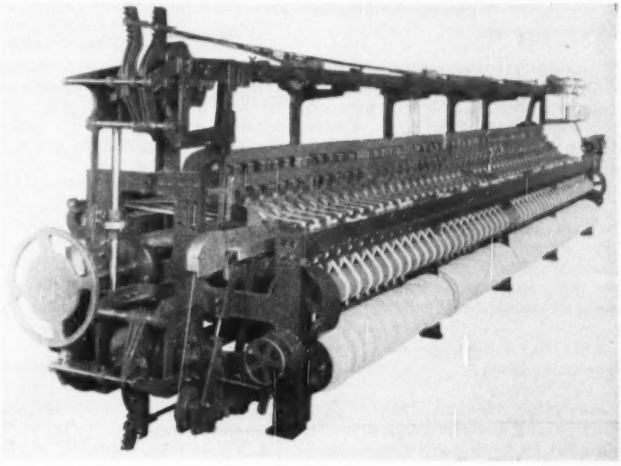
By varying the construction as outlined above, using the one loom frame, and many other standard features, the loom may be used for weaving varying types of the general run of webbing, such as non-elastic, light tapes up to heavy webbing, elastic webbing, ribbons, trimmings, and special webbings.

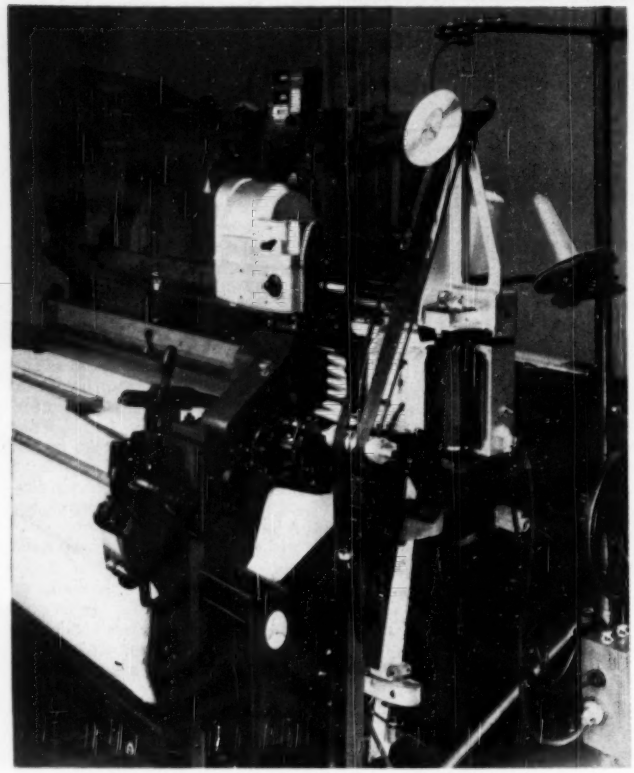
The loom has a very strong frame made entirely of metal. The slotted lengthwise members facilitate the changing of the location of the cross girts and arch braces to accommodate various lay spacings. The sheave stands in the arches are also adjustable.

The lay is of a light, but strong construction; the lay beam, the backs to which the shuttle blocks are attached, and the reed rails are of magnesium.

The cam harness motion with the upper and lower set of cams geared

C&K multiple shuttle narrow fabric loom.





Draper loom equipped with Universal's Unifil device.

together through an upright shaft provides for a positive up and down movement of the harness frames, with cam rolls operating on the face of accurately-machined cams rather than in grooves.

A stop-and-start motor is used with a "timing belt" direct from the pulley on the motor to the pulley on the crank shaft. This drive is very simple compared with most of the drives previously used, and any possibility of belt slippage is eliminated. Electrical braking is used, and therefore the loom is stopped and started very quickly. There is a possible speed range of from 120 to 275 picks per minute obtainable by the changing of the motor pulley only.

Crompton & Knowles Loom Works, Worcester, Mass.

For additional data, request item G-310, using business reply card on page 194.

Filling Winding at the Loom

The Unifil Loom Winder presents an entirely new concept of the method of handling filling. The device is incorporated in a Draper loom and winds, strips and readies the filling bobbin for transfer automatically at the loom. Consequently, the need for a filling winding room is completely eliminated, according to the manufacturer.

The use of the loom winder greatly reduces handling of filling yarns, minimizes chances of mixed filling, and does away with the need for a large filling bobbin inventory.

The speed of the winder is calculated to run at 10-20% faster than the rate at which the yarn is used by the loom. This relatively low speed is said to further preserve yarn quality.

The Unifil is so constructed that it does not in any way interfere with the mechanical function of loom transfer. Unit replacement of the entire winder assembly is possible while the loom is in operation.

The operation of the winder is performed with a maximum of eleven bobbins—seven of which are in the full bobbin magazine, one each in the stripper, the shuttle, the empty bobbin magazine, and in the winding position.

The function of the loom winder is as follows:

1. The empty bobbin is positioned by action of gripper arms which remove it from the empty bobbin magazine and place it into the winding position.

2. After the bobbin is wound, it is released from the winding position and allowed to drop into the full bobbin magazine, and this is accomplished by releasing the yarn tension, cutting the tail end and placing the end in a tensioning drum which holds the end in a parallel position to the tip of the bobbin until such time as a loom transfer is accomplished.

After the action of transferring, the ejected bobbin's trailing end is cut by the Stafford thread cutter, and the bobbin is dropped into the receiver chute of the stripper. The bobbin passes through a revolving brush which picks up the trailing end and after the bobbin has been positioned at the base of the stripper, the revolving brush strips the bobbin. The brush is fitted above a take-up cone onto which the waste is taken up. The waste is forced off the cone to a waste collector by movement of oscillating fingers.

After the yarn has been stripped from the bobbin, the bobbin is ejected from the stripper into the path of the conveyor belt and since the conveyor belt is equipped with magnetic lifters, the rings of the bobbin are attracted by the magnet and the bobbin is carried up and into the empty bobbin magazine and the cycle described above is repeated.

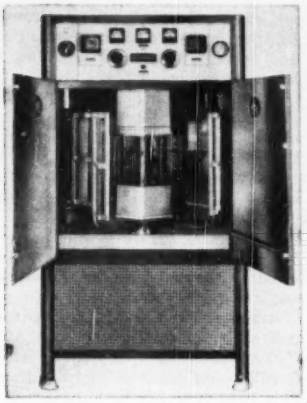
Universal Winding Co., Universal Division, Providence, R. I.

For additional data, request item G-301, using business reply card on page 194.

New Weather-Ometer

A new Weather-Ometer, called the Type XW, is a completely redesigned and modernized version of the Model X-1-A.

The source of radiation in the Type XW is a sunshine carbon arc of the open-flame, motor driven type whose radiation at the specimens very closely approximates natural sunlight both as to intensity and spectral dis-



Type XW Weather-Ometer (Atlas).

tribution. The arc, accommodating three pairs of carbon electrodes, automatically shifts from one pair to another as the carbons are consumed, thus providing for a continuous burning time of 16 to 18 hours per trim of carbons.

The Corex D filter panes are mounted in a new, more convenient type holder designed to eliminate the possibility of unfiltered radiation reaching the specimens.

The lamp is mounted in a fixed position and is rotated through 180°, providing easy access to all parts of the lamp for retrimming and servicing and thus eliminating all overhead arches, cables, pulleys and counterweights. After trimming, the arc will operate continuously without attention until the carbons are consumed, at which time a limit switch automatically shuts down the entire machine.

Specimen temperatures, over a wide range, are automatically maintained throughout the test at the value selected by the operator.

The capacity of the unit is 54 specimens—each measuring 3 by 9 inches.

Atlas Electric Devices Co., 361 W. Superior St., Chicago, Ill.

For additional data, request item G-315, using business reply card on page 194.

Water Repellent for Smooth, Non-Absorbent Fabrics

A two-package water repellent that can be mixed in one bath for application on smooth, non-absorbent fabrics made from filament yarns of ny-

Cab-operated electric hoist operating in conjunction with a single beam crane picks up the load *at the door*—delivers it directly to storage area. No re-handling. No aisle space or turning radii needed. Minimum head room required. Every cubic foot of space is put to work.

This is but one example of many applications designed by Shepard Niles specialists to reduce handling costs. Your problem may be different, but you can be sure you'll get the right answers from Shepard Niles—America's largest manufacturer of load-lifting and load-moving equipment. Write for Bulletin 130 today.

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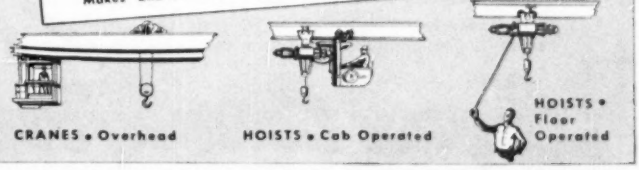
CRANE & HOIST CORPORATION

Makes and sells all three lifting tools for airborne shop loads



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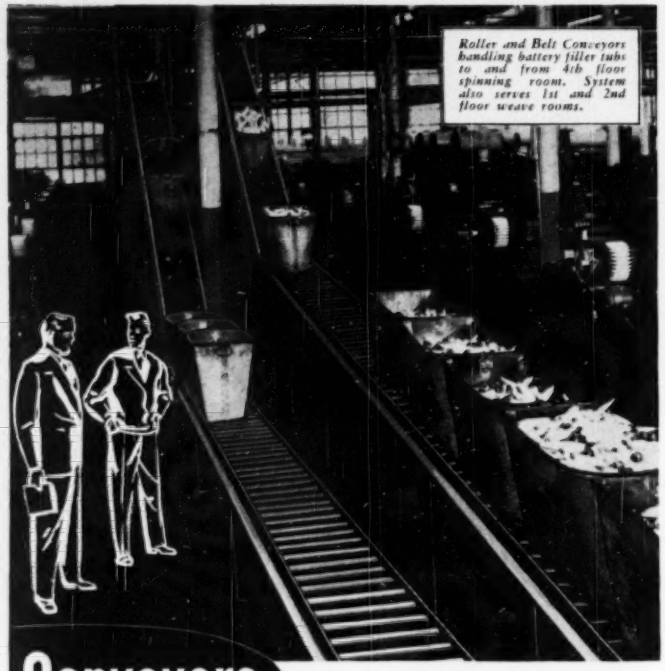


Roller and Belt Conveyors handling battery filler tubs to and from 4th floor spinning room. System also serves 1st and 2nd floor weave rooms.

Conveyors ..best means to...

straight-line-flow production

Straight-line-flow, via conveyors, is as profitable in the textile mill as in hundreds of other industries.

Logan installations in many mills to date are providing higher speed production, eliminating waste motion, saving floor space, and reducing maintenance costs.

Logan textile mill systems include the use of roller conveyors, belts, vertical lifts, and other types.

This conveyorized handling makes worthwhile production economies in supplying material to looms, in the movement of containers of empty and filled bobbins, in the handling of cloth between operations, and to warehousing or shipping.

Write today for information or for the nearest Logan engineer to contact you.

Logan Conveyors

LOGAN CO., 206 CABEL ST., LOUISVILLE, KY.

lon, rayon, etc., does not give trouble by specking and foaming due to poor and unstable emulsions, according to the manufacturer.

Products making up the package are Atco-Dri-A and Atco-Dri-B. They are mixed by stirring 5% of Atco-Dri-A into a full volume of water at 160 F, after which the Atco-Dri-B is stirred in. Solution is padded onto cloth, dried and silk calendered.

No marking off difficulties are experienced, it is claimed. Also, finished fabrics have a soft, silky hand and a high spray rating.

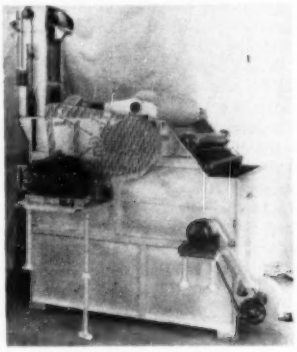
Atlantic Chemical Co., Inc., Centredale, R. I.

For additional data, request item G-307, using business reply card on page 194.

Continuous Cloth Washer of Stainless Steel

The Type SLW continuous cloth washer recently placed on the market features all stainless steel construction. Other advantages claimed for the unit are as follows:

1. D-c motor drive with rheostat speed control through counter-balanced dance rolls.
2. Positive counter current flow, with constant uniform predetermined liquor level in each tub.
3. New slope of tub for smoother operation and fewer stops for rethreading.
4. Each unit driven by d-c motor and kept in step by tensionless compensators.
5. Folding or plating cleat roll provided for smooth operation and more uniform treatment.
6. Flow of water and liquor stops



Type SLW washer (Riggs & Lombard).

automatically when machine stops.

7. Cloth fully protected against damage by electric stop motions.

Riggs & Lombard, Inc., Lowell, Mass.

For additional data, request item G-309, using business reply card on page 194.

Skinkle's "Textile Testing" Revised and Enlarged

The second edition of *Textile Testing* by John H. Skinkle, associate professor of the Department of Textile Chemistry, Lowell Textile Institute, has recently been published by Chemical Publishing Co., 26 Court St., Brooklyn 2, N. Y. (Price, $7.75).

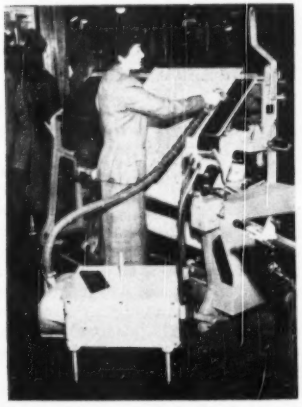
The new developments in all branches of the textile industry have been included. A new feature of this revised and enlarged edition is the scheme for the identification of organic finishing agents.

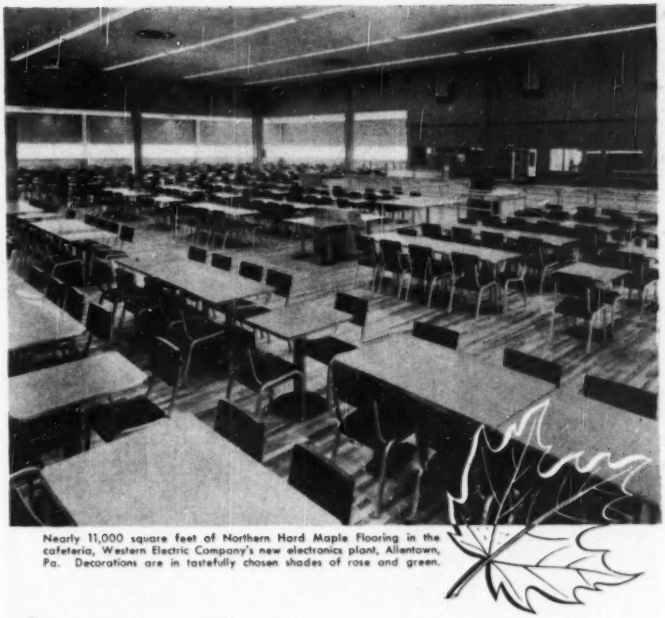
Where several test methods are available, the one considered the best is discussed most thoroughly. The information is complemented by many illustrations, and at the end of eacn chapter a bibliography is given for those requiring additional information.

Portable Thread Trimmer

A portable thread trimmer is mounted on wheels for easy mobility to any spot in the plant, and can easily be handled by a girl. It is adaptable for clipping threads from piece goods selvages when the ma-

Portable thread trimmer (CRA).





Nearly 11,000 square feet of Northern Hard Maple Flooring in the cafeteria, Western Electric Company's new electronics plant, Allentown, Pa. Decorations are in tastefully chosen shades of rose and green.

Another handsome, comfortable, enduring floor of

NORTHERN HARD MAPLE

Clean and bright and pleasant Northern Hard Maple floors have been the favorite of textile folks everywhere for generations. The many photographs of fine and famous mills we have shown you prove it. Here, "for a change" you see MFMA Northern Hard Maple serving another great industry . . . an industry interested in the self-same qualities in a floor that textile men require—smooth, resilient, light-reflecting surface, toughness, easy upkeep, freedom from cracks, splinters and dirt. All official MFMA grades of Northern Hard Maple—First, Second, and Third—are now available. And the especially thrifty and tight-laying 1½-inch face width can be had, too. Write, if you'd like full facts on approved floor finishing methods.

See Sweet's
Latest (1950) editions —Architects 13g-7; Engineers 4j-21 — for full data and standard specifications.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
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FLOOR WITH NORTHERN HARD MAPLE
BEECH AND BIRCH

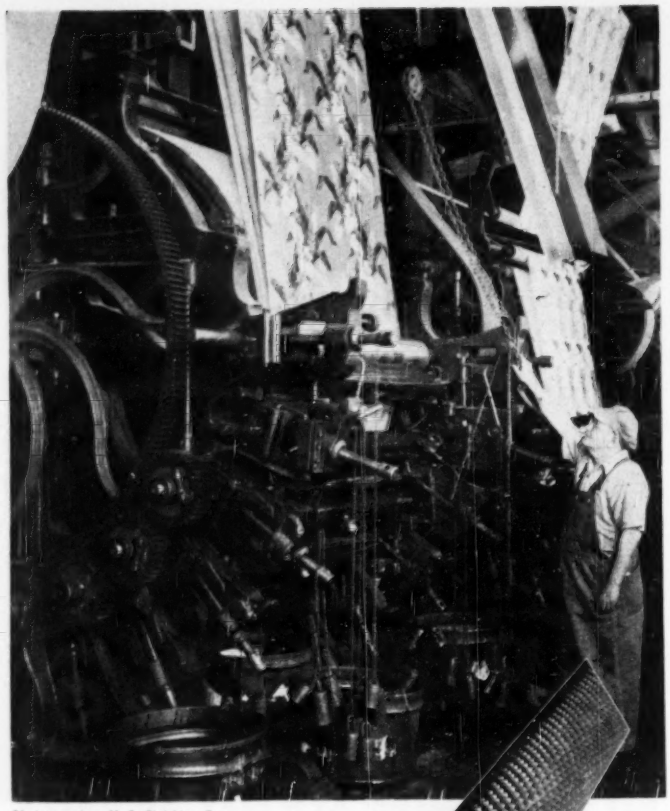


Photo courtesy U. S. Finishing Co.

METLKOR

STANDARD WITH

U. S. FINISHING COMPANY

The United States Finishing Company is famous for the quality of its textile printing. It is significant that Jenkins' METLKOR furnisher brushes are used exclusively by this important concern.

The cores of these furnisher brushes have aluminum tubes and bronze ends, fitted with stainless steel shafts. The aluminum is completely covered with flat copper strip, notched to receive the nylon tufts, which are sealed in with solvent-proof plastic cement.

This gives a firm, even-faced brush, assures thorough distribution of color and complete roll cleaning. These brushes are impervious to moisture, easy to clean after use, so it will not bleed. The brushes cannot sag, split, or get out of alignment. The cores are practically indestructible.

Write for catalog of Jenkins' brushes used by textile printers and in cotton, rayon, and woolen clothrooms.

*Reg. U. S. Pat. Off.

M. W. JENKINS' SONS, INC.

444 POMPTON AVE. CEDAR GROVE, N. J.

terial is unrolled or measured on a measuring machine.

Powered by a ⅓ hp motor which combines the cutting and suction action for more economical operation without loss of pressure or cutting speed, the device can be connected to any electrical outlet and contains an extra long hose for greater flexibility.

The trimmer also features regulated suction to conform to the different weight materials, and the "easy-view" waste compartment enables the operator to tell at a glance when the bin is full and must be emptied.

Cutting Room Appliances Corp., 45 West 25th St., New York 10, N. Y.

For additional data, request item G-312, using business reply card on page 194.

Special Rayon Staple for Carpet Use

Avisco "15" is a new kind of rayon staple specially designed for use in rugs and carpets. It is a 15-denier, dull crimped viscose rayon staple engineered to meet the requirements of the carpet industry and carpet service.

Carpets and rugs containing the fiber have already been woven on Axminster, Wilton and velvet looms, it is claimed. They are being woven in a wide range of plain colors and patterns, in twist and in cut and uncut pile types.

Rugs and carpets made with the fiber have a firm, sturdy surface; they also wear exceptionally well, according to the manufacturer.

American Viscose Corp., 350 Fifth Ave., New York 1, N. Y.

For additional data, request item G-305, using business reply card on page 194.

Textile Cutting Machine

A high-production machine for cutting and stacking textile articles has recently been announced.

The essentials of the machine are a series of driven nip rolls, stationary and revolving knives, and an automatic air stacker. As many as five thicknesses of material are fed into the machine at one time. The cloth is cut on the run, and the length to be cut is set by manipulating a series of change gears. The standard machine will cut pieces, it is claimed, from 14" to 71" in ¼" and ½" steps.

The material passes between a stationary knife and a revolving blade

similar to a lawnmower construction. As the cut pieces pass along conveyor belts and start to fall to the floor, controlled jets of air neatly stack them over a bar.

The usual speed recommended is sixty cuts per minute, giving a production of 300 cut pieces per minute on five thicknesses. Materials up to 44" in width can be handled on the standard machine, but wider models will be manufactured if required.

Sjostrom Machine Co., Lawrence, Mass.

For additional data, request item G-314, using business reply card on page 194.

Automatic Viscosity Control System for Warp Sizing

The advantages of cooking and homogenizing are combined in a recently developed automatic viscosity control system for warp sizing, resulting in the production of a uniform size solution of controlled viscosity.

The size is cooked and delivered to the size box heavy enough to more than overcome the effect of condensation and normal agitation of the size in the box (all existing mill equipment can be utilized for this part of the system).

A Viscometer applied to the size box continuously measures the viscosity of the size as it is used. This information is transmitted to a recorder where a 24-hour record is maintained. A control point dial is provided in the recorder case which can be readily set to control the viscosity to the desired value.

A motor-driven centrifugal pump, controlled by the Viscometer, homogenizes the size to the correct viscosity, while drawing the size from one end of the box and returning it to the other.

Other advantages claimed: Sizes warps with maximum uniformity and better penetration, reduces cooking time, increases efficiency, reduces manufacturing costs.

Norcross Corp., Newton, Mass.

For additional data, request item G-302, using business reply card on page 194.

"Safetygraph" on Falls

Why falls are one of the most serious of all industrial accident hazards, how they occur, and how to prevent them are the topics presented in a

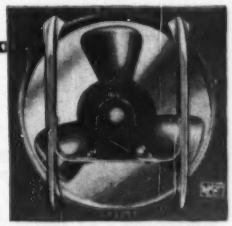
SPECIFY "Buffalo"

For ECONOMICAL Exhaust Service!

INDUSTRIAL EXHAUSTERS FOR AIR AND MATERIAL HANDLING

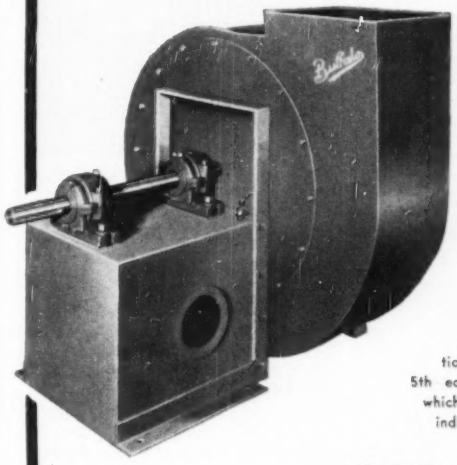
"Buffalo" Industrial Exhausters are *all-welded*. This means greater strength and lighter weight. It also means *smooth* wheel and housing surfaces — less friction in moving air and materials. It all adds up to ECONOMY OF OPERATION over many trouble-free years! AW wheels for air, interchangeable with MW wheels for materials. WRITE FOR BULLETIN 3576.

"Buffalo" Industrial Exhauster



BREEZO FANS For *Local Ventilation*

Sturdy, square die-stamped panel makes these low-cost fans simple to install in walls. Rigid, die-stamped blades are shaped to move maximum air very quietly. "Buffalo" Breezo Fans require almost no attention. 8", 12", 16", 18", 20" and 24" sizes to fit your requirements. WRITE FOR BULLETIN 3222-F AND PRICES.



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VENTILATING FORCED DRAFT • AIR WASHING COOLING • AIR TEMPERING HEATING • INDUCED DRAFT EXHAUSTING PRESSURE BLOWING

Scales today provide vital accounting data that *directly affects your costs* . . . and *profits!* That's why it's so important to *control your costs* with TOLEDO accuracy!

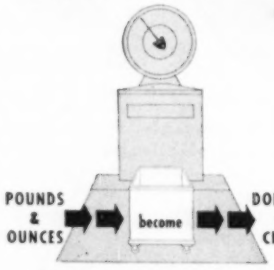
Your weight records originate at many points throughout your textile plant—in receiving, shipping and in production departments—supplying basic information that affects your inventories, receivables, payables and the final profit figure!

Toledo has the scales to start your cost records *right* . . . with dependable automatic weight indication to give the *speed* and *accuracy* essential to material and production control. Also, service as near as your telephone with factory-trained service men in 200 cities of United States and Canada. Send for bulletin 2020 on Modern Weight Control. Toledo Scale Company, Toledo 12, Ohio.

LAP SCALES

PRINTED WEIGHTS

MATERIAL becomes MONEY on your SCALES!



Errors made at the scale stay wrong forever. There is no chance to recheck; either the material has been shipped or has lost its identity in the general stock. You've got to be *right* —weigh it right with Toledo!

Guard Costs with
TOLEDO *All the Way*

new "safetygraph" prepared by the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill. Designed as a visual aid for training small groups, it consists of 12 spiral-bound pages, 18 x 24", inserted in a leatherette portfolio. When set on a flat surface it opens to form an easel.

Lasting Flame Resistance for Cellulose Fabrics

Development of a new product which is said to give lasting flame resistance to cellulosic materials of all types has been announced. When treatment is properly applied, appearance, tensile strength and "feel" of cotton and rayon, for example, are not affected and the fabric will withstand repeated laundering, dry cleaning and weathering, according to the manufacturer. Exposure to the acid sours and alkalies used in commercial and industrial laundries does not affect its lasting flame-resistant qualities in a fabric, it is claimed.

The new product, called "Titanox"-FR, is a titanium organic compound, although other materials are added to lessen afterglow and improve stability. The material will be marketed as a solution.

This product can only be applied by textile finishers. Flame applied to treated fabrics results in a char area only in the heated portion. The material will not support a flame or show a flare-up on a brushed napped and pile fabric.

National Lead Co., 111 Broadway, New York 6, N. Y.

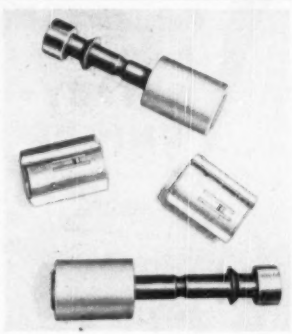
For addiitional data, request item G-304, using business reply card on page 194.

Portable Vacuum Cleaner for Heavy Duty Application

A new, 3 hp, heavy-duty vacuum cleaning portable, providing 4.4 cubic feet of dust storage capacity and designed for continuous operation on heavy dust deposits, is designated the Hoffco-Vac No. 30.

The machine is claimed to offer "operating efficiency, design compactness and maneuverability advantages not previously available in one-sweeper units of this size." It will operate one 50-foot length of 1½-inch vacuum hose. Nine dust bags provide a total bag surface area of 30 square feet.

The vacuum producer, of the multistage centrifugal type, is made of



Ball Bearing Top Rolls

25,000 hours of operation without lubrication is one of the outstanding advantages cited for this ball bearing top roll which consists of three units—the main axle and two rollers. The main axle is composed of a shaft with a bearing mounted on each end; the top rollers consist of shells with the cots drawn over them.

Shells may be removed from the shaft by simply pulling them from either end. When they are replaced they must be pressed on until a protrusion inside the shell strikes against the outer race of the bearing, assuring the shells resting in the same position on the bearings.

Other advantages claimed: 30% less ends down in spinning; power consumption decreased; better quality yarn produced; inexpensive shell construction and therefore low replacement costs.

American Textile Engineering, Inc., Arlington, N. J.

For additional data, request item G-311, using business reply card page 194.

aluminum castings and is equipped with self-lubricated ball bearings, outboard mounted. Motor operates the exhauster through a multiple V-belt drive and both are supported on rubber cushions for smooth, quiet operation.

For ease of maneuvering through plant aisles and congested areas, the unit has been compactly designed. It is 66 inches long, 32¼ inches wide and 63½ inches high. Two fixed wheels and one swivel wheel (all rubber-tired and ball bearing) enable the machine to be turned in its own

Because they're years ahead in steam generation . . .

only

CYCLOTHERM

Trade Mark Reg.

STEAM GENERATORS

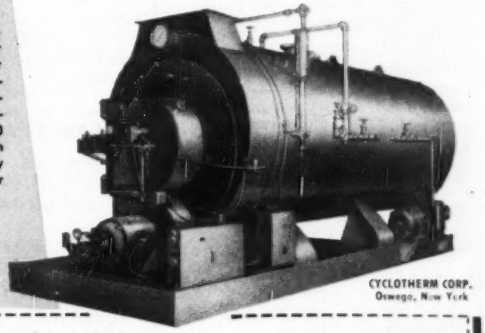
have cyclonic* combustion POWER

* WHAT IS IT? It's the modern scientific discovery of transferring heat at the highest degree of efficiency with a new low in fuel consumption. Principal factors of which are the cylinderized solid flame with its exclusive cyclo-motion power, designed to utilize the full potential of every particle of fuel . . . and the thin layer of air resulting from centrifugal force that's always between the flame and wall of combustion chamber. A combination to produce steam far in excess of conventional standards for measured heating surfaces.

SEND FOR ALL THE BIG REASONS

Learn how the completely automatic Cyclotherm with its unexcelled all-in-one package type features wipe out waste and excess costs. If you are planning a new or replacement boiler installation it will pay you to first get the facts on Cyclotherm. The coupon below is for your convenience.

SIZES available to fit your steam or water load for processing or heating. Low pressure to 200 psi fired with light or heavy oil, gas or combinations.



CYCLOTHERM CORP. Oswego, New York

CYCLOTHERM CORPORATION
OSWEGO, N. Y.

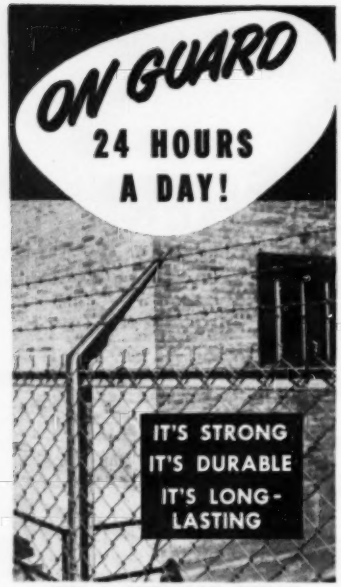
DEPT. TI-7

Gentlemen: Please send me bulletin P-1 showing the advantages of Cyclotherm's new concept in Heat Transfer. Without obligation, of course.

NAME _____

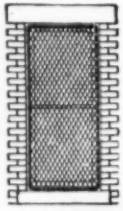
ADDRESS _____

CITY _____ ZONE _____ STATE _____



IT'S A STEWART FENCE

Notice the sturdy All-Beam framework . . . the extension arm and line post—an integral unit. Stewart Non-Climbable Chain Link Wire Fence, the heaviest and strongest manufactured, features a number of exclusive structural advantages you can't afford to overlook. Write for folder "Here's why you should buy a Stewart Chain Link Wire Fence."

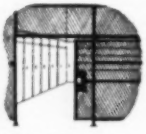


WINDOW GUARD
(Wire or Iron)

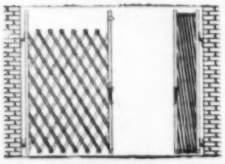
Made with round or channel frames to fit any size or shape opening. When requesting prices please give measurements and send diagrammatic sketch.

WIRE MESH PARTITIONS—Sectional

Fit any height or width. Easily and quickly erected. When writing for prices please give all measurements involved.



STEEL FOLDING GATES



Made in single or double gate construction to fit any width opening. Prices on request. Please give width and height of opening.

THE STEWART IRON WORKS CO., INC.
1724 Stewart Block Cincinnati 1, Ohio

Stewart IRON and WIRE FENCES

NEW EQUIPMENT (Continued)

length and facilitate handling by one man.

U. S. Hoffman Machinery Corp., 105 Fourth Ave., New York 3, N. Y.

For additional data, request item G-318, using business reply card on page 194.

Steam Circulation System for Drying Machines

An even surface temperature and an improved rate of heat transfer are benefits to be derived from a newly developed steam circulating system for heating units in textile drying machines.

The system consists of a float trap and a circulator. This circulator is an injector which uses the uncondensed steam to induce turbulence in the flow of condensate, thus improving the heat transfer and speeding up production with a saving of steam, according to the manufacturer.

Sarco Co., Inc., Empire State Bldg., New York 1, N. Y.

For additional data, request item G-319, using business reply card on page 194.

Fluorescent Magnifier

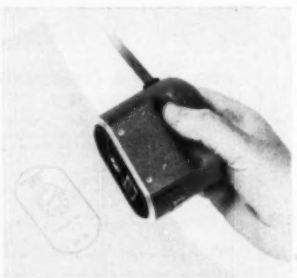
Two industrial magnifiers, a bench type and a portable type, are equipped with fluorescent lighting. Designed for inspectors and others engaged in close work, the units floodlight the work area with scientifically focused, shadow-free fluorescent light, magnifying the work through a 5-inch diameter lens.

Industrial Products Co., 3133 N. Fourth St., Philadelphia 33, Pa. (G-505).

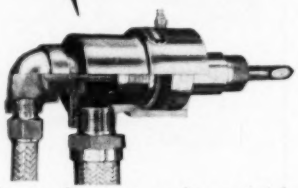
New IBM Machines

A new card verifier which incorporates automatic verification, a dual-feed carriage for simultaneous-

Electric time stamp (IBM).



Why Engineers and Maintenance Men Prefer ROTARY UNIONS*



Wherever heating or cooling materials must be injected into revolving shafts or drums, ROTARY UNIONS offer distinct advantages.

1 They Last Longer

The seal is lapped absolutely flat to the millionth of an inch so that dirt and rust cannot get in to cause wear. Complicated supports are unnecessary. The ROTARY UNION is designed to float on the flexible hose, absorbing misalignment and shock.

2 They Speed Production

ROTARY UNIONS can be run at high speeds with minimum friction drag and with positive sealing. Longer, uninterrupted trouble-free service cuts down-time.

3 They Reduce Maintenance

Ball bearing construction effects a 30 to 80% saving in power. Simplified piping reduces installation costs and makes the machine more accessible.

Save by replacing your stuffing boxes, packing joints, and worn-out steam joints with efficient ROTARY UNIONS. Write for our illustrated catalog.

Agents in Principal Cities

Perfecting Service Co.
332 Atando Ave.
Charlotte 5, N. C.

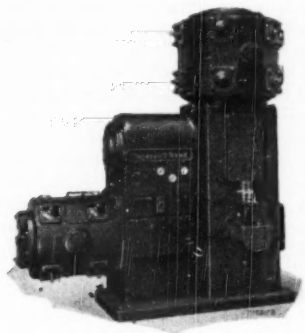
*Reg. Pat.

ly preparing two closely related documents, a lightweight electric time stamp which can be applied to any surface, a new electric formswriter with complete operating controls at the typist's fingertips, an electric typewriter with decimal tabulation to facilitate typing columns of figures, and two new type faces for the executive model of the IBM electric typewriter have recently been developed.

International Business Machines Corp., New York, N. Y. (G-415).

L-Design Air Compressor

Simplicity of design, operation, and maintenance, as well as operating economy and compactness are advantages claimed for a new line of L-design, packaged type, heavy duty, electrically driven air compressors. Designated as the XLE, this compressor embodies a single vertical



Model XLE air compressor (I-R).

low pressure compressor cylinder, a horizontal high pressure cylinder, and a synchronous motor mounted directly on the crank shaft. Sizes range from 125 to 350 hp for continuous full load service and two-stage compression to 80-125 psi discharge pressures.

Ingersoll-Rand Co., 11 Broadway, New York 5, N. Y. (G-510).

Stainless Steel Transfer Pump

Made in sizes with capacities from 100 to 600 gpm, a new line of stainless steel, flooded suction, low head transfer pumps features simplicity of design. Practically any low viscosity liquor can be handled through these units, it is claimed. Anti-friction bearings are employed and mounted outside the case. Removable end plate makes inspection of inside of pump easy. Driven by standard type motor through V-belts and sheaves.

Riggs & Lombard Inc., Lowell, Mass. (G-420).

Fire Protection Principles Presented in New Manual

An illustrated manual dealing with the planning and supervisory phases of fire protection has recently been published by the Associated Factory Mutual Fire Insurance Companies. Entitled "Organizing Your Plant for Fire Safety," the manual emphasizes suggested procedures for guidance of management and reflects methods now in use in many of the leading industries. Outlined are: routines for inspection and maintenance of protective systems and fire fighting equipment, for preventing or controlling sprinkler shut-offs, and for

REDUCE "ENDS-DOWN"—CUT COSTS

WITH

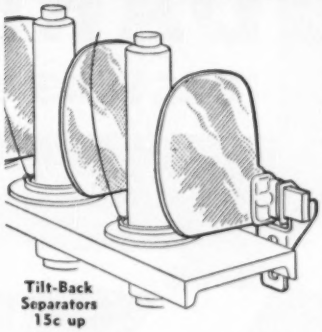
WHITEHEAD

Permalite

ALUMINUM ALLOY SEPARATOR SHIELDS

Why burden your frames—and your overhead—with heavy, old-fashioned iron separator shields? Whitehead Permalite Shields are made of a special aluminum alloy—strong as steel but many times lighter. They mount right on the ring rail and can be flipped back for doffing . . . And with all their superiority, they cost no more!

EASY TO INSTALL Simply drill and tap ring rail. We supply the shields and ba; drilled to your gauge and ring count, together with proper support hangers and all screws and washers.



Tilt-Back Separators 15c up

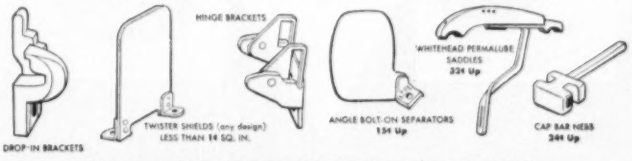
Stainless Steel Available for Rayon Spinning

EACH JOB ENGINEERED When ordering specify rail width, thickness of back flange, gauge and number of rings in each rail on one side only, as 24-22-22-22-24.

ONLY WHITEHEAD PERMALITE SHIELDS OFFER THESE ADVANTAGES

- Fewer ends down: some mills report 27% less
- Use of lighter travelers which reduce power costs, wear of rings and travelers
- Solid polished blades (not slotted) which cause less wear on yarn, collect less lint and fly, resulting in smoother yarn
- Less vibration, wear of cams, worm gears and lifter-rod bearings
- Reduction of live weight—from as much as 300 lbs in old slotted steel shield assemblies to as little as 35 lbs per frame
- No attention after installation

OVER 4,000,000 IN USE BY MORE THAN 350 AMERICAN MILLS


DROP-IN BRACKETS
TWISTER SHIELDS (any design) LESS THAN 14 SQ. IN.
HINGE BRACKETS
ANGLE BOLT-ON SEPARATORS 15¢ Up
WHITEHEAD PERMALUBE SADDLES 22¢ Up
CAP BAR NEBS 24¢ Up

IMMEDIATE DELIVERY FROM STOCK ON ALL ITEMS

PATENTED AND MANUFACTURED BY
WHITEHEAD ENGINEERING CO.
522 WEST PEACHTREE STREET, N.W.
ATLANTA 3, GEORGIA

EXCLUSIVE DISTRIBUTORS
Meadows Manufacturing Co.
BOX 4354 • ATLANTA 2, GEORGIA

*SEE YOUR MEADOWS MAN
Alabama, Georgia, Mississippi
R. L. Holloway, Box 4354, Atlanta, Ga.
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North Carolina
Walter Coleman, Box 722, Salisbury, N. C.
Tennessee
Ed F. Brown, 417 Dale Ave., Knoxville, Tenn.
Northern Representative
Matthews Equipment Co., 93A Broadway, Providence, R. I.

handling emergencies. Inquiries regarding availability should be addressed to Factory Mutual Engineering Division, 184 High St., Boston 10, Mass.

Pocket Humidity Indicator

A precision pocket instrument shorter than a pencil is said to accurately indicate relative humidity by the wet-and-dry bulb method. Known as the "TAG" Pocket Humidicator Model 8704, it can be used either in the hand or mounted on the wall. Built-in slide rule converts wet and dry bulb readings to relative humidity.

Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N. J. (G-408).

Air Conditioner for Laboratories

A new self-contained unit designed specifically for the air conditioning of laboratories provides a precise year-round control of temperature, humidity and air cleanliness. It is completely factory built and does not require additional equipment. Occupies only 6 sq. ft. of space and can be quickly installed or moved from one location to another with a minimum of expense.

Carrier Corp., Syracuse, N. Y. (G-419).

Cotton Exchange Functions

(*Continued from page* 89)

more time to trade on the "basis." I have seen many a mill buyer lose a cent a pound in the futures market while trying to buy at 15 points cheaper basis than was then prevailing. The purchase of futures in this interim would have saved this loss.

Second, [insure by] the purchase of futures against requirements of raw cotton for deferred shipments, allowing for either orderly monthly basis buying or protection during a period when you feel the basis is too high, but during which period you still want basis futures price insurance.

As to unsold inventory insurance, inventory values are usually closely linked with the cotton market; hence, the sale of futures is a partial price insurance against inventory loss due to lower prices for raw cotton.

4th Function. Another function of the cotton exchange is to provide daily price or value information to everyone—to the farmer, the merchant, the manufacturer, the converter, the retail dealer.

During World War I, when the cotton exchanges were closed for a short period of time, only the larger merchants had much idea of the true market value of cotton; hence, the farmers, the smaller traders, the mills, were all more or less in the dark as to actual market values. Today's market and your price insurance agent are no further away than your telephone, all due to the wonderful system of marketing, as exemplified in the workings of the New York Cotton Exchange.

AMANTHRENE* VAT COLORS
provide the answer to the demand for
better color fastness in textiles

Latest Addition!

FLAVONE GC

in paste or double powder form

Our newest vat color particularly recommended for **printing** fine cottons and rayons. Easily adapted to **dyeing** of these same fibers. Unequaled for all around fastness to washing, chlorine or peroxide bleaching and soda boiling. Gives a perfect Kelly Green when used in combination with AMANTHRENE BRILLIANT GREEN J. Offers the particular advantage of a fine, smooth paste.

Another of the Amanthrene range of superior vat colors. For detailed information on the whole range available, as well as data regarding your own particular requirements, consult our nearest branch. A.A.P. technicians are always happy to be of service.

AMERICAN ANILINE PRODUCTS, INC.

50 Union Square, New York, N. Y. • **Plant: Lock Haven, Pa.** • **Branches:** Boston, Mass. Providence, R. I. • Philadelphia, Pa. • Charlotte, N. C. • Chicago, Ill. • Los Angeles, Cal. Chattanooga, Tenn. • **Dominion Anilines & Chemicals, Ltd.** • Toronto, Canada • Montreal, Canada

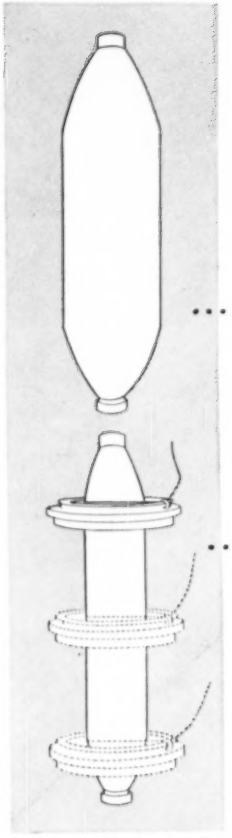
*Reg. U. S. Pat. Off.

SERVING THE TEXTILE INDUSTRY SINCE 1899

SONOCO

STRAIGHT SIDE WARP SPINNING

BOBBINS



Increase Yarn Production

Improve Yarn Quality

..... Straight side allows full traverse permitting a larger package. Top suspension cuts doffing time by breaking sharply without drag and pull . . . Two features that mean an important savings in production costs.

..... Straight side allows a constant angle of yarn pull from top to bottom. This means *uniform tension* and results in the production of more uniform yarn with a constant degree of elasticity, throughout.

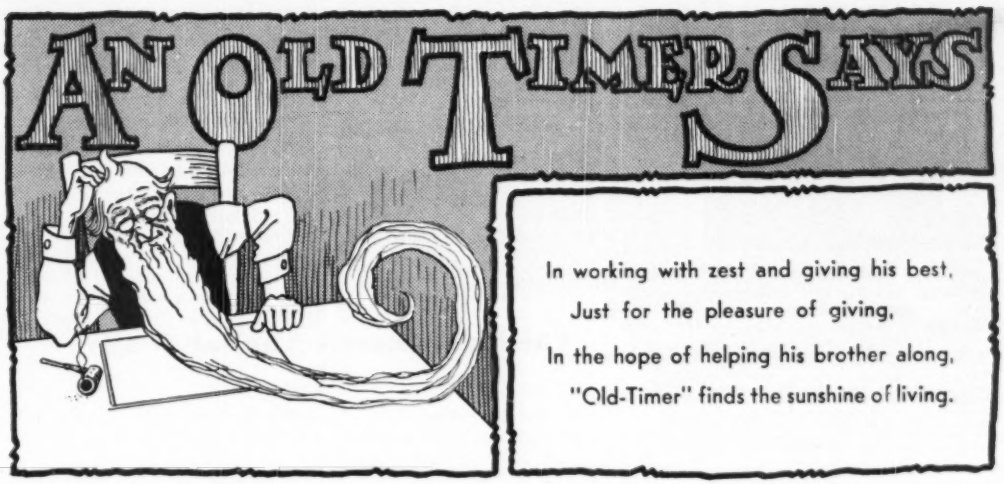
SONOCO Bobbins are made in five standard sizes. Mill-run tests report definite improvements in yarn quality and production.

sonoco
PAPER CARRIERS
REG. U.S. PAT. OFF.

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

A Vivid Imagination "Pays Off"

(A continuation of the discussion, "Can You Dream?" which began in the February issue.)

ONE METHOD which has been quite helpful to OLD-TIMER in his efforts to solve a labor problem, be it either in the form of something which affected many operatives or an individual operative, and whether it was trouble brewing or in his efforts to raise production:

He made every effort possible to inject himself, so to speak, into that problem. That is, he would *Imagine* he was that weaver or that spinner or section man or one of the group of such. He *Imagined* he was drawing their pay—he was doing their work—he was living in their house, and he was doing the things they do when they were not working—(that is a most important item).

If you are practical enough, and you should be, matters not whether you have actually been a weaver or spinner or not, and if you can direct your day dreaming along those lines, it will help greatly in finding the *cause* of the effect you are trying to solve. Don't forget, brother, you must be honest with yourself in directing your Imagination along these lines. You are not the overseer nor the superintendent nor the manager, but just a plain operative or section man. However, you can be confident in knowing that in practically every problem which confronts you, be it in the operation of machinery or a labor problem, if you can make that faculty of Imagination do its duty, it will open the door to a solution.

The man's imagination which is trained to respond when called upon will "pay off," be he textile operating executive, merchant, lawyer, doctor, or in any vocation.

A Battle of Wits

Being a textile operating executive is your business, and any business or profession is a battle of wits with your competitors. That statement is not a theory, but a condition which confronts you. That is why OLD-TIMER does his darndest to show you how easy it is to acquire a well balanced education.

First, he has given you a simple way to enlarge your vocabulary, without which you cannot express your ideas to your operatives or employers, neither can your Imagination work as it should. Without words you have no tool with which to convey your ideas. A baby cannot inform you that it has a tummy ache because it has not words to convey the information. By this reasoning, can't you see that if you have *more words* at your command than the other fellow then you can put your ideas over better than he can? Your brain simply has more to imagine with than his does.

Psychology??

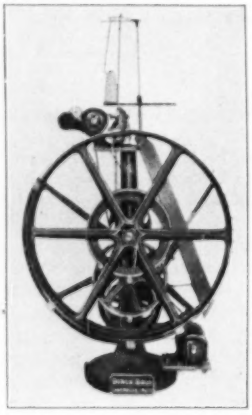
Then psychology. We have tried in many articles to break down and analyze that high sounding word so you would realize how simple it is to apply it to your labor relations with which you, no doubt, are more familiar. And we

MODERN FINISHING MACHINERY

OUR 1950 MODEL REGULATED-TENSION, OPEN-WIDTH CONTINUOUS MACHINE

A machine of stainless steel construction, designed so that additional units may be readily added. A standard machine which with proper modifications may be used for Boiling-off, Scouring, Crabbing, Dyeing or Open Soaping. A roller bearing equipped machine with the pressure applied to rubber squeeze rolls by air cylinders. Drive by D.C. motors controlled by Dancer Rolls. Used on Pile Fabrics, Cottons, Rayons, Rayon Blends, Gabardines, Worsteds and Woolens.

HIGH SPEED BALL SCUTCHER
with Motor Drive for Cottons and Rayons.



OUR PATENT "SUPREME" BUTT-SEAM GREY ROOM SEWING MACHINE

fitted with Merrow Head. This is a machine for use in the grey room where production is important. Simple in design.

BIRCH BROTHERS, INC.

32 KENT STREET
SOMERVILLE, MASS.
Phone: PRospect 6-3512

Southern Representative:
John C. Cosby, P. O. Box 212
Greenville, S. C.

HAROLD W. BIRCH CLIFFORD W. BIRCH
STANLEY W. BIRCH

usually follow with an article on some phase of thinking like this one on "Dreaming;" or how to get new ideas or something along those general lines.

Can't you see, fellows, that all of these articles are first cousins, so to speak. They are related inasmuch as OLD-TIMER is thinking about them as a whole—and all in one book which might have some such title as "Textile Executive Practical Training," with a subtitle "To Convince Overseers, Superintendents, and Managers How Broad and Comprehensive They Can Train Their Minds to Be." All of this with but one object, viz: To make you a better operating executive than you ever dreamed you could be.

The Guaranteed Annual Wage

(*Continued from page* 104)

basis, and a still greater number which could have operated that way for the past ten years or so. There are very few concerns, however, having a sufficiently stable business to make it reasonably certain that they could guarantee an annual wage over any considerable period of time. We believe that there is one meat packing company which has an annual guaranteed wage system, and the meat packing business is of course an extremely stable business, with relatively few violent fluctuations in demand.

Had such an annual guaranteed wage system been in effect in the textile industry in 1930, it would either have been completely abandoned by 1932, or probably every textile mill in the United States would have been bankrupt. The same situation would have faced most other industries.

The labor union people claim, of course, that the guaranteed annual wage would prevent depressions by maintaining purchasing power. The Townsendites claim that by the simple expedient of giving away money to old people, we can maintain purchasing power. The New Dealers contended that by giving away money to everybody they could maintain purchasing power. The exercise of purchasing power is, however, a different thing from the mere possession of money, and we see no reason to think that guaranteed annual wages would prevent depressions when depressions were due, and such a system might easily make a depression worse by quickly bankrupting all of the people who had accumulated any savings and invested them in business.

ANY ANNUAL guaranteed wage plan which is now in effect would have had to be instituted on a competitive basis. The employer who agreed to such a system would have had an opportunity to be sure that he was undertaking something that he could be reasonably expected to do, and to bargain with his people on a wage scale based on actuarial possibilities. The guaranteed average annual wage could be accepted by a group of workers as an alternative to the possibilities of higher wage rates on an intermittent basis.

This whole agitation for a guaranteed annual wage is part and parcel of the welfare state trend which was started in this country about 1933. It is a continuation of the movement to discourage individual thrift and enterprise and make the working man think of himself as a pensioner with an assured income, whether he earns it or deserves it. Of course, only the government itself could ever hope to guarantee the pension to everybody, and the inevitable outcome of all of these schemes for automatic security without effort on the part of the secured must inevitably wind up in the lap of the government, and we should think of all such schemes as just another link in the socialist shackles being riveted upon us.

We fail to see how the guaranteed annual wage plan could ever be put into effect except through government force. With the ups and downs in the textile industry, any such scheme as this which

would be aimed at maintaining the highest possible week-to-week wage rates on an annual basis, would inevitably lead to the complete bankruptcy of the industry in the next depression. It must not be forgot that there can be acute depressions in one industry, while the country is generally prosperous. During the frantic boom from 1920 to 1930, while many industries were reaching fantastic levels of inflation, about 25 per cent of the textile industry was being liquidated, and that portion which was not liquidated ran for some time on the basis of two or three days' employment per week, with most of the employers constantly on the brink of bankruptcy.

If, as appears to be the case, the powerful labor monopolies have taken up the cudgels for this other welfare scheme, it is pretty certain to be pushed aggressively, and since it can only be made effective by government intervention, there is going to be a lot of political pressure brought to bear for this latest outrageous demand on the part of the unions.

No economic fantasy is too incredible for the socialists and their fellow travelers to propose, and to put into effect if opportunity offers, and since it is doubtful if industry could ever be forced into accepting this annual wage idea without government intervention, the labor monopolies will strive to bring about such intervention.

This is a matter which deserves the earnest attention of all American employers.

Blue Ridge Conference

"Industrial Relations Policies and Practices for a New Decade" will be the theme of the 31st annual session of the Southern Industrial Relations Conference to be held at Blue Ridge, N. C., July 19-22. The objective of the conference will be to review carefully the "Why and How" of certain policies and practices that are considered vital at the beginning of this new decade in building better employer-employee relations in southern industry.

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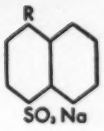

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WHAT THE TEXTILE MILLS ARE DOING

Contract has been let by **Respro, Inc.,** Cranston, R. I., for a one-story addition to its plant.

Leo L. Durocher, 155 Rathbun St., Woonsocket, R. I., is principal incorporator of the newly chartered **Ace Textiles, Inc.,** West Warwick, R. I., which will manufacture textiles.

Springs Cotton Mills, Chester, S. C., has under construction an addition to the Gayle mill, in which about 15,000 spindles and 400 looms will be installed.

Blackstone Plush Mills, Inc., Clinton, Mass., has changed its name to **Blackstone Mills, Inc.**

Drayton Mills, Spartanburg, S. C., has approved plans for construction of a two-story office building.

A new filament rayon weaving plant for **Textron Southern, Inc.,** is under construction at Williamston, S. C. The plant will comprise 16,000 square feet of space; 960 looms and necessary warping, winding and slashing equipment will be installed.

Contract has been let by **Thomaston (Ga.) Mills, Inc.,** for a one-story addition to the bleachery, as well as alterations and improvements in the present building.

American Woolen Co. has authorized the reopening of its Beaver Brook mill at Collinsville, Mass., which has been inactive for about a year. Blankets will be produced.

Contract has been let by **Morschner Dye Works, Inc.,** Needham Heights, Mass., for a one-story addition to its plant.

Naumkeag Steam Cotton Co., Salem, Mass., is planning the transfer of its bleaching department from the mill at Peabody, Mass., to Pequot Mills at Salem.

The mill of **Albert J. Bartson, Inc.,** Charlotte, N. C., has been acquired by **Moore Textile Co.** The manufacture of upholstery fabrics will be continued.

Erwin Mills, Inc., Durham, N. C., has let contract for a two-story addition to local mill No. 6. Expansion in the combing department is planned. A two-story addition to the Stonewall, Miss., mill is now under construction, and will be used for weaving service.

The Ace Reclamation Co., Cleveland, O., garnetted wool stocks, wool padding, etc., will be taken over and operated by the recently organized **Ace Woolen Mill Co.**

Dearnley Brothers Worsted Spinning Co., Inc., Germantown, Pa., is planning construction of a one-story addition to its plant.

The recently chartered **Krew Fabrics, Inc.,** Central Falls, R. I., will manufacture rayon fabrics. Henry J. Blais, Jr., 10 White St., Pawtucket, R. I., is principal incorporator and representative.

United Merchants & Manufacturers, Inc., New York, N. Y., has acquired about 250 acres of land near Carlisle, S. C., for a new finishing mill to serve certain plants in that area.

Fastex, Inc., Newark, N. J., cotton tape, cords, etc., has acquired a one-story building near Cedartown, Ga., and is expanding production at the new location.

Walton Cotton Mill Co., Monroe, Ga., has plans under way for the construction of a one-story addition to the mill to be used for office service.

Bigelow-Sanford Carpet Co., Inc., is planning a new factory branch, storage and distribution building in Chicago, Ill. About 110,000 sq ft of floor space will be available in the one-story building, which will cost, it is reported, about $375,000, with equipment.

Franklin (Mass.) Yarn Co. has been purchased by Samuel Ketover of the National Wadding Co. It is expected that operations will continue as heretofore.

Contract has been awarded by **The Kendall Co.** for new additions to its Walpole, Mass., mill, which are reported to cost over $300,000, with equipment.

Contract has been let by **Burlington Mills Corp.** for construction of a one-story addition to local mill "G" at Greensboro, N. C. A $500,000 expan-

sion of the Fayetteville, N. C., plant, a unit of the rayon spinning division, is under way.

Chatham Manufacturing Co., Elkin, N. C., has sold its branch mill at Waynesboro, N. C., and transferred some equipment to Elkin, where two new additions to the local mill are being built for expanded production.

William Teres Co., Inc., 171 Madison Ave., New York, N. Y., is reported to be considering the construction of a rayon weaving mill at Siler City, N. C. The project, which will cost approximately $200,000, with equipment, will be built by Sil-Ter Realty Co. and operated by **Siler City Weaving Co.,** recently organized subsidiaries of William Teres Co.

Plans are under way for a one-story addition to **Arista Mills Co.,** Winston-Salem, N. C., for office space.

Eugene L. Jalbert, 62 Glen Road, Woonsocket, R. I., is principal incorporator of the newly chartered **Rhoditex, Inc.** Woolen goods will be manufactured.

Orange Cotton Mills, Inc., Orangeburg, S. C., has been incorporated for the manufacture of cotton goods. Mrs. Lyall M. Wannamaker is president.

Contract has been let by **Dorchester Fabrics, Inc.,** Summerville, S. C., for construction of a one-story addition to the plant.

The American Thread Co. is planning to sell approximately 120 homes in the mill village of its plant at Dalton, Ga.

Employees of the **Henderson (N. C.) Cotton Mills** and Plaid Mills Plant of **Burlington Mills Corporation,** Burlington, N. C., have been awarded the Liberty Mutual Insurance Company accident prevention flag in recognition of their excellent records on accident prevention.

Bruno Herman, president of Brunest Textile Corp., Clifton, N. J., and Samuel Fire of Nina Piece Dye Works, Troy, Pa., have purchased all of the capital stock of **Empire Piece Dyeing and Finishing Co.,** Paterson, N. J.

Ambrose T. Smith, formerly vice-president and general manager of Queen Dyeing Co., Providence, R. I., has purchased the Greenwich Bleachery, East Greenwich, R. I., and organized a new corporation, known as the **Greenwich Printing & Dyeing Co., Inc.,** to continue operating the plant.

The creation of an Industrial Fabrics Division, with Harry B. Benson, vice-president, in charge, has been announced by **Cheney Brothers.** The new division will include the negotiation and control of all government contracts for production by the firm, as well as market research and sale of fabrics of a distinctive technical nature. The sales division in New York, formerly called the Industrial Fabrics Division, will now be known as the special fabrics department.

Ninon cloth for curtains and lingerie will be manufactured by the newly organized **Danan Mills, Inc.** Space in one of the buildings of the Nashua (N. H.) Manufacturing Co. will be occupied by the firm. J. Daniel Fitkof is president; Arthur Rey, vice-president and treasurer; and Ladislaw M. Roehr, clerk.

Plans are under way for installation of new cards, spinning frames, and looms as part of the expansion and modernization program at **Arkansas Cotton Mills, Inc.,** Morrilton, Ark.

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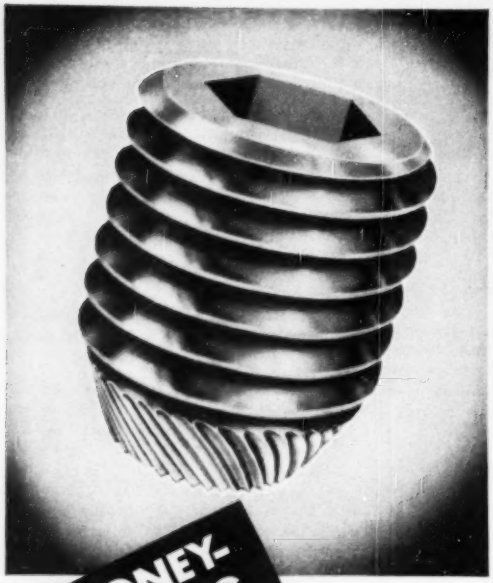

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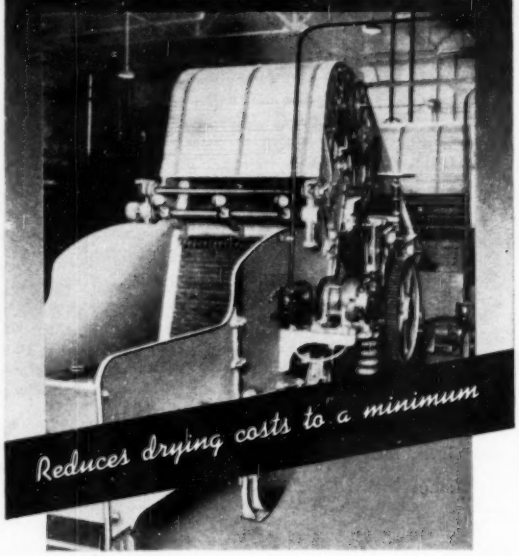

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First Listing of New Publications

7-1. Winding Machines. This bulletin is Part 2 on the No. 44 Roto-Coner. Profusely illustrated with exploded view drawings and many charts and tables relative to drum winders. Universal Winding Co., Providence 1, R. I.

7-2. Comb Box. New brochure describing "The Colonel" comb box for efficient trouble-free low cost carding. Illustrations showing parts for both cotton and wool comb boxes with part numbers and specifications. Odom Machine Mfg. Corp., Roswell, Ga.

7-3. Mercury Clutches. Described and illustrated in three new bulletins. Number 216 describes the Mercury Clutch in general, listing various applications including textiles. Bulletin 217 describes the clutches applied to gasoline engines while Bulletin 218 covers electric motor installations. Mercury Clutch Div., Automatic Steel Products, Inc., Canton 6, Ohio.

7-4. Wetting Agents. Data on the average wetting time for the different products in various acid, base and salt solutions are presented along with information on the effects of organic solvents on wetting time. Properties, uses, and specifications of "Tergitol" wetting agents 7 and P-28 and of "Tergitol" penetrants 4, 08, and E. H. are given. Carbide and Carbon Chemicals Div., Union Carbide and Carbon Corp., 30 East 42nd St., New York 12, N. Y.

7-5. Du Pont Color Conditioning. New 32 page booklet illustrated in color. Color conditioning is the scientific painting plan resulting from years of research on the funtional use of color. Developed during the war to help raise morale and cut absenteeism among war workers by giving them a better environment at their jobs. Color conditioning has been further developed to include industrial plants. Dept. P.R. 2, Finishes Div., Du Pont Co., Wilmington, Del.

7-6. "Functional Photography in Industry". Numerous illustrations depict the use of photography in business and industry for research, production, quality control, training, advertising and sales. Industrial Photographic Div., Eastman Kodak Co., 343 State St., Rochester 4, N. Y.

7-7. Bulletin T-6 has just been issued on the resistance of nickel and its alloys to corrosion by caustic alkalies. 24 pages containing many illustrations and over 40 tables show performance of materials in a variety of fields including viscose rayon. International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.

7-8. Cleaning Systems. "Certified Climate and Cleaning System" is the title of a new illustrated booklet giving latest information on Parks-Cramer's systems. Every product and uses fully discussed with a typical two story layout of certified climate central station air conditioning system. Parks-Cramer Co., Fitchburg, Mass.

7-9. Polyphase Motors. Bulletin No. B-201 describing polyphase squirrel-cage motors has just been issued. Fully illustrated with construction and assembly details—speed torque curves at varying full-load torque percentages for three different types of these drip-proof motors given. Star-Kimble Electric Co., 200 Bloomfield Ave., Bloomfield, N. J.

7-10. "Cordura" High - Tenacity Rayon. New booklet describes how properties and performance of high tenacity rayon have enabled this strong, low bulk product to replace materials such as sisal, cotton, jute, hemp and even steel. "Cordura" rayon superiority in tensile strength, fatigue resistance, uniformity of quality and other characteristics described. Many uses pictured and described. Rayon Div. .E, I. Du Pont de Nemours & Co., Wilmington, Del.

7-11. Controlled Humidification. Function and benefits in textile operations in the cotton, woolen and worsted processes, and of ductless evaporative cooling is presented in quick fact form. Relative humidity recommendations for each step in the various processes and the references to humidity requirements of cut fiber synthetics. Schematic diagrams showing equipment and typical installations. American Moistening Co., 260 W. Exchange St., Providence, R. I.

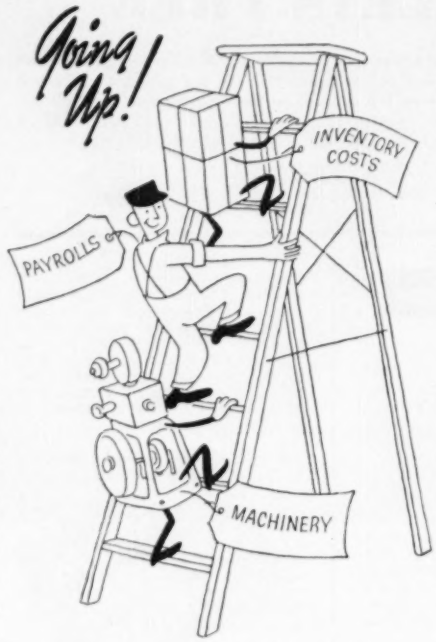
7-12. Lumite Woven Fabrics. Is the title of a new booklet covering Saran, of which Lumite fabrics are woven, and includes description of general properties, orientation, shrinkage, temperature, knotting, tying, moisture absorption, tensile strength, elongation, etc. Lumite Division, Chicopee Mfg. Co., 40 Worth St., New York 13, N. Y.

7-13. Chlorine Data. Presented in chart form and gives the heat content of the liquid, of saturated gas and of super-heated gas in the temperature range of 40°F. to 560°F., and in the pressure range of 15 to 1100 P.S.I.A. Engineers will appreciate the fact that the English system of units has been used throughout, to eliminate troublesome conversions. Diamond Alkali Co., 300 Union Commerce Bldg., Cleveland 14, Ohio.

7-14. Differential Master Sender. New Booklet No. 2150 describes this pneumatic machine used as the metering element in the measurement and control of steam, gas and liquid flow, liquid level, pressure differential and similar applications. Hagan Corp., Hagan Bldg., Pittsburgh 30, Pa.

7-15. Packaged Air Conditioners. A new two-color catalog covering a complete line of packaged air conditioners has recently been issued. Many applications given and illustrations of all the conditioners with a cutaway drawing showing how a packaged unit operates. General Electric Co., Air Conditioning Dept., Bloomfield, N. J.

7-16. Automatic Controls for P. I. V. Variable Speed Drives—Booklet No. 2349 contains photos and operating diagrams of interesting applications of company's new controls available in four basic types—Electronic, Hydraulic, Pneumatic, Mechanical. Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill.



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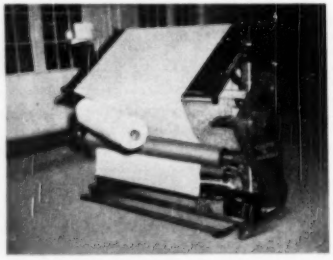

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GENERAL ECONOMIC, MANAGEMENT . . .

4. HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

5. FACTORING AND FINANCING — Illustrated booklet on how factoring works, cost and credit information.—TEXTILE BANKING COMPANY, New York, N. Y.

8. "WASTE REDUCTION AND CONTROL"—19-page illustrated booklet giving primary waste factors; how to calculate cost of departmental waste; actual waste figures from mills; contains survey of waste practices. — SOUTHEASTERN ENGINEERING CO., West Point, Ga.

10. "LABOR AND MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES"—8-page illustrated folder outlining principles of industrial engineering as they apply to textiles.—AMERICAN ASSOCIATED CONSULTANTS, INC., New York, N. Y.

11. FLETCHER JUNIOR "SUPER-SELF-BALANCING" EXTRACTOR—Illustrated folder describing this new extractor with the highly efficient self-balancing arrangement which uses steel springs instead of rubber buffers.—FLETCHER WORKS, INC., Philadelphia, Pa.

12. CONDENSED LISTINGS—8 page pocket sized booklet listing by plant flow the machinery and mill supplies available. Designed to help purchaser in grouping his orders to greatest advantage.—ATKINSON, HASKRICK & CO., Boston, Mass.

13. BROCHURE describing financial service to speed turnover of working capital; credit service for sales expansion and credit loss elimination.—WILLIAM ISELIN & CO., INC., New York, N. Y.

14. TEXTILE WEIGHT CONTROL—Forms 2009 and 2010, showing how Toledo Printweight weight records cut costs by eliminating human errors at the scales. Special purpose scales for the textile industry fully discussed.—TOLEDO SCALE CO., Toledo, Ohio.

16. TEXTILE RESEARCH — Booklet describing Research Department's commercial scale facilities for cotton spinning, worsted spinning, etc. Explains organization and functions of Department.—AMERICAN VISCOSE CORP., SYLVANIA DIV., New York, N. Y.

PLANT AND PLANT MAINTENANCE . . .

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. HUMIDIFICATION, EVAPORATIVE COOLING—Bulletins available displaying AMCO automatic selfcleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., Providence, R. I.

107. FINNELL SCRUBBERS — Illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart Ind.

108. MAPLE FLOORING — Booklet describing finishing of Northern Hard Maple Flooring—list of M.F.M.A.-approved heavy-duty floor finishes. — MAPLE FLOORING MANUFACTURERS ASSOCIATION, Oshkosh, Wis.

110. BASIC TOOLS FOR MAINTENANCE—Two-page brochure covering the uses of the Kent Wet Scrubber and Kent Electric Floor Machine; Dry Suction Machine; D-20 Dry Scrubber and illustrating them.—THE KENT COMPANY, INC., 274 Canal St., Rome, N. Y.

112. TEXTILE TRUCKS—Brochure describing vulcanized Fibre textile trucks, engineered by materials handling experts. Types fully discussed. — J. C. PADDOCK CO., Spartanburg, S. C.

115. ATOMIZER HUMIDIFIER — Recent issue of "Parks' Parables" on Turbomatic self-cleaning humidifiers, and automatic regulation. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

118. "PARKS PARABLES" — Recent issue on Parks Turbo Traveling Cleaners for spinning, winding and warping. Type C.T.C. "Up Draft" cleaners keeps overhead and ceilings free from fly and lint.—PARKS-CRAMER CO., Fitchburg, Mass.

119. MOPPING EQUIPMENT—Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., Chicago, Ill.

135. SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C44, Wilmington, Dela.

138. MAGNESIUM IN THE TEXTILE INDUSTRY—Illustrated booklet on properties of magnesium for spinning, twisting, winding, knitting machines, looms, beams, spools, bobbins.—ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES—Illustrated Booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS' SONS, INC., Cedar Grove, N. J.

152. AIR CONDITIONING FOR THE TEXTILE INDUSTRY—40-page illustrated book covering air conditioning from humidity control to complete refrigerated conditioning with installations, charts, covering ABC's of cooling textile mills.—CARRIER CORP., Syracuse, N. Y.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, Minneapolis 11, Minn.

163. LAWLOR FLOOR MACHINES — Illustrated pamphlet containing specifications and describes All-Purpose Floor Machine.—THE SELIG COMPANY, Atlanta, Ga.

164. ECONOMY IN DRY SCRUBBING—Booklet describes Floroseal—Elortone "dry" maintenance system—reduces consumption of seal and steel wool.—THE SELIG CO., Atlanta, Ga.

170. WHY IT PAYS TO ANCHOR YOUR TEXTILE MACHINES WITH UNISORB — Illustrated booklet discussing control of vibration and noise and how UNISORB reduces maintenance costs.—THE FELTERS CO., Boston, Mass.

172. VENTILATING FANS — Bulletin 3339 gives facts on Buffalo Ventilating Fans. — BUFFALO FORGE CO., Buffalo, N. Y.

179. BETTER WAYS — Form 2020, condensed catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Toledo, Ohio.

185. WHERE ARE YOUR FLOORS?—This piece of literature covers the various sizes of Kent floor machines which are available for polishing, waxing, buffing, scrubbing, steel wooling and light sanding.—THE KENT COMPANY, INC., 274 Canal Street Rome, N. Y.

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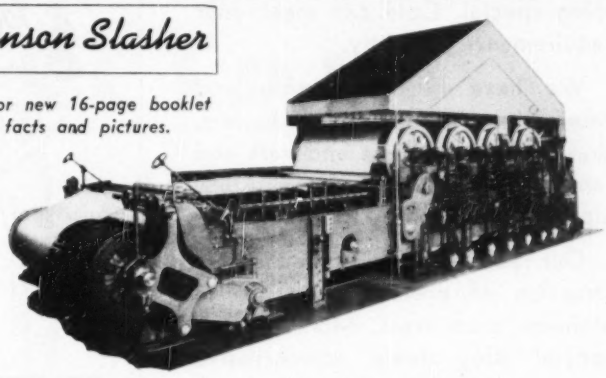

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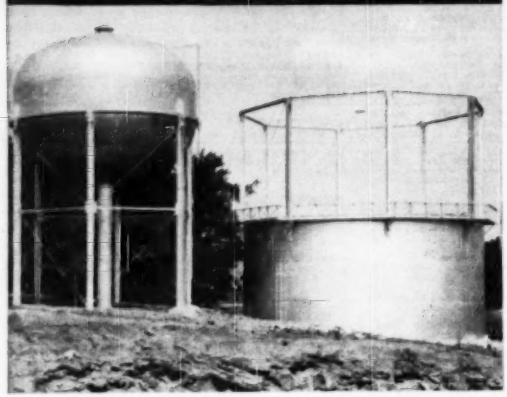

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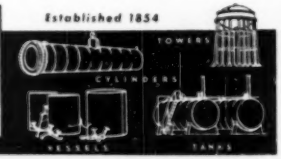

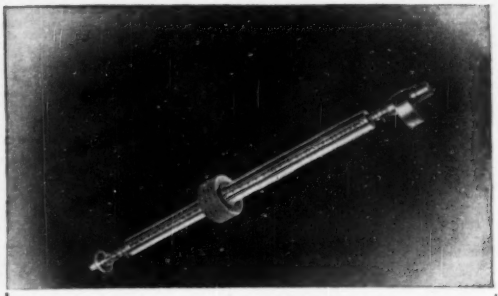

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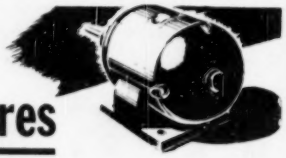

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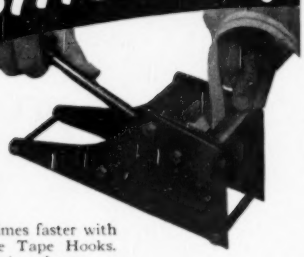

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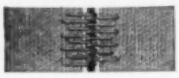

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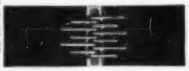

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TEXTILE INDUSTRIES

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667. SINGLE APRON STOCK DRYERS—Folder describing the latest type in economical style which every mill desiring drying economy can profitably use. Many installations satisfactorily established.—C. G. SARGENT'S SONS CORP., Graniteville, Mass.

668. VAT DYEING OF WOOL—Write for Color Technical Bulletin No. 10 for outlining fundamental dyeing procedures and explaining new advances in the dyeing of wool with Calcolan Fast Colors.—CALCO CHEMICAL DIVISION, AMERICAN CYANAMID CO., Bound Brook, N. J.

682. LUG STRAP WASHERS—Series 1-C illustrates bronze Gearless type and wrought steel Gear-ed type of lug strap washers.—THE JACOBS MANUFACTURING DIVISION, Bridgeport, Conn.

683. PRINTING WITH AIRDYE PIGMENT COLORS—Bulletin P-1 describes preparation and application of pigment water-in-oil emulsion for printing cotton, rayon, acetate and blends.—DYESTUFFS AND CHEMICAL CORP., TEXTILE COLORS DIV., Paterson, N. J.

685. CUTTING MACHINERY FOR THE TEXTILE INDUSTRY—Catalogue describing hand to fully automatic machines which will measure to length, cut, and stack cotton, rayon, woolen, etc.—STADIUM MACHINE COMPANY, INC., 10 East 40th St., New York, N. Y.

DYESTUFFS, CHEMICALS, SOAPS . . .

705. THEORETICAL AND APPLIED SILKOXANINE—Attractive 32-page booklet outlining methods of silk-weighting and outlining investigations on the weighting, loading, and delustering of silk.—SAINT PRODUCTS CORP., New York City.

710. HERCULES PINE OILS—Leaflet briefly describing advantages of using this manufacturer's pine oil in manufacture of textiles.—HERCULES POWDER COMPANY, Wilmington, Del.

712. VANDERBILT MATERIALS—Available in a 4-page booklet describing non-ionic Penetrants, and Soft, and its use in textile processing.—R. T. VANDERBILT CO., INC., New York, N. Y.

713. LIQVATINE ED—Vat dyeing assistant increases penetration and level dyeing with maximum fastness of color.—SANDOZ CHEMICAL WORKS, New York City.

715. AQUAROL AND ARKANSAS PRODUCTS—Bulletins on Aquarol, water repellent for cloth with method of preparing bath; also on other Arkansas products for cotton, rayon, silk and rayon, laundering.—ARKANSAS CO., INC., Newark, N. J.

717. FINISH KB—Finishing compound designed as binder in combination with alkies and aldehyde compounds to make thermo-setting resin coatings resistant to water, chemical vapors and grease vapors.—SANDOZ CHEMICAL WORKS, New York.

720. SYNTHETIC FIBERS — Attractive folder briefly describing the company's products and the manufacturing of synthetic fibers.—HERCULES POWDER COMPANY, Wilmington, Del.

722. LEVELERS—Booklet describing use of Levelers for leveling red and yellow dyes on cotton, rayon and other.—AMERICAN ANILINE PRODUCTS, INC., New York, N. Y.

725. RAPIDASE FOR DESIZING—Bulletin explaining its action, use, and commercial value of Rapidase.—STALEY MFG. CO., INC., 136 Madison Avenue, New York 16, N. Y.

740. LUPOMIN C—Pamphlet outlines the application of the quaternary ammonium compound recommended for treating cotton and synthetic fibers to give soft hand, lubrication, odorless finish, brighter shades, etc.—JACQUES WOLF & CO., Passaic, N. J.

744. LUPOMIN—Leaflet outlines the advantages of the quaternary amine softener which is suitable for use on cotton, linen, silk, wool, synthetic fibers and mixed fabrics. A small percentage of Lupomin gives a supple, smooth hand.—JACQUES WOLF & CO., Passaic, New Jersey.

750. TEXTILE SPECIALTIES—Listing and describing a wide and complete range of specialties manufactured and sold by American Cyanamid Company for textile use in various processes, such as finishing, dyeing, printing, laundering, and textile chemistry.—AMERICAN CYANAMID COMPANY, 30 Rockefeller Plaza, New York 20, N. Y.

753. ONYX TECHNICAL DATA SHEETS—Two new data sheets describing the use, advantages, and applications of Xylol Resins F-10 and Xylol Resin F-11.—ONYX OIL & CHEMICAL COMPANY, Jersey City 5, N. J.

756. HOSIERY FINISHES AND FORMULAS—Attractive new booklet describing the Amalgamated line of hosiery finishes and giving formulas for their use.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 24, Pa.

764. DU PONT PEROXIDE BLEACHING SYSTEMS—New book discussing and describing Oxo bleaching processes for textiles.—Request information from E. I. DU PONT DE NEMOURS & CO., HAY—ORGANIC CHEMICAL DEPT., Wilmington, Del.

765. SURFACE TENSION DEPRESSANT — The booklet, "Aerosorbex and Alkanox—The Ideal Dry Spreading Penetrant," introduces a new product which can be used as a wetting agent, a dye penetrant, a spreader, a package dyeing.—ALANT PRODUCTS CORP., New York City.

771. "STARCH STABILIZER" — Folder on Vanamul, a product used for textile sizing and printing.—Complete specifications, results obtained, etc.—R. T. VANDERBILT CO., New York 17, N. Y.

775. TECHNICAL CHEMICAL DATA SHEETS—Complete set for dyeing, printing and finishing operations, covering dyes, assistants, softeners and emulsifiers.—ONYX OIL & CHEMICALS CO., Jersey City 5, N. J.

774. BOYCE TEXTILE CHEMICALS—This booklet briefly describes the leading Boyce products for textile processing, printing, dyeing and finishing.—BOYCE CHEMICAL COMPANY, Canton Hill, N. J.

775. CAUSTIC SODA—Bulletin No. 6, an 82-page technical bulletin in the latest Dr. Bailey's well-known style. Contains many illustrated FLOW-DIAGRAMS, tables, charts and diagrams.—SOLVAY SALES DIVISION, 40 Rector Street, New York 6, New York.

776. SERICYNE—Bulletin describing the properties and characteristics of Sericyne, a standardized liquid proteolytic enzyme preparation which, upon established methods of enzymatic degumming.—WALLERSTEIN COMPANY, INC., 180 Madison Avenue, New York 16, N. Y.

777. HOSIERY DYEING—Catalog on hosiery dyeing machinery, skein dyeing machinery, package dyeing, stripping and drying equipment.—KNITTAL DYE AND CO., Philadelphia 24, Pa.

780. HYDROGEN PEROXIDE—Compilation of physical data and properties of hydrogen peroxide. Reactions listed in organic and inorganic chemistry along with applications.—BECCO SALES CORP., Buffalo, N. Y.

KNITTING . . .

800. KNITTING MACHINES — Bulletin for hosiery, outerwear and outerwear, flatts of illustrated machine, full description of machine and how it operates, with specifications.—SCOTT AND WILLIAMS, INC., New York, N. Y.

801. THE WILDMAN SINGLE-HEAD FULL-FASHIONED HOSIERY MACHINE — Description on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

802. THE TUBE-TEX FOR TUBULAR KNIT GOODS—Bulletin describing this modern machine which knits tubular goods, sometimes called seamless, in one continuous operation, covering cuffs, caring ribbed, plain tubes and tapered.—H. W. BUTTERS-WORTH & SONS CO., Philadelphia, Pa.

804. STATISTICAL SURVEY—Covering the Full-Fashioned Hosiery knitting industry in the United States and Canada.—TEXTILE MACHINE WORKS, Reading, Penna.

805. TEXACO IN THE KNITTING INDUSTRY—Folder on knitting mill lubrication.—THE TEXAS CO., New York, N. Y.

810. ALUMINUM BEAMS—Catalog No. 1-51 describes Harper magnesium and aluminum specialties for the textile industry. Illustrates the complete line of warp beams, the design of conventional beams, the new one-piece, the design of conventional beams.—HARPER INDUSTRIES, INC., Jackson, Mich.

812. CIRCULAR KNITTING MACHINES—Interesting formation and new illustrated in this circular folder, just released, which describes this company's small diameter circular knitting machine.—ATKINSON COMPANY, Philadelphia 24, Pa.

815. THE NEW REINER HIGH SPEED TRICOT MACHINE—160" or 64" knitting widths. A richly illustrated catalog describing in many novel features of construction and performance.—M. ROBERT REINER, INC., Weehawken, N. J.

816. THE NEW REINER KAYLOOM—A combination knitting weaving machine in an illustrated catalog, showing filler attachment and other important points about the machine.—ROBERT REINER, INC., Weehawken, N. J.

817. AUTOMATIC SELECTIVE STRIPPING MACHINE—Descriptive and illustrating folder, entitled "If It's Stripping, Consult Scranton," just available. Important manufacturing involved in this process are described.—H. HILTON COMPANY, Philadelphia, Pennsylvania.

818. MILTON LIGHT METAL GEARS FOR EVERY APPLICATION—Catalog 48-A describing Light Metal Trico Gears made in standard and special sizes from Bronze Gears to Nylon Worm Gears.—MILTON MACHINE WORKS, INC., Milton, Pa.

820. VARIABLE STRIPES AND PLAIDS—Booklet describing equipment, Models 8A and 8A-Nop for knitting plaids, stripes or combinations of stripes for knitting plaids.—SUPERIOR KNITTING MACHINE CO., INC., 105 Johnson Ave., New York.

SEWING MACHINES . . .

815. THE NEW UNION SPECIAL LOCKSTITCH MACHINE—Information on the new model which omits the necessity of setting the feeding cam contained in Bulletin No. 54L.—UNION SPECIAL MACHINE CO., Chicago 10, Ill.

821. FELDLOCK "DUALFEED" MACHINE—Bulletin No. 505 illustrating the Feldlock "Dualfeed" unit feed—the latest sewing machine for reversible, work pants, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

824. FLAT BED SEAMING MACHINE—Full Information contained in Bulletin No. 524 on Type 1101 "G & G" Flat Bed Seaming Machine.—WILLCOX & GIBBS SEWING MACHINE CO., New York 10, N. Y.

MATERIALS HANDLING . . .

1001. HOW TO DETERMINE WHERE EVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY — Profusely illustrated. Gives clear, concise understanding of material handling. Helps you to decide where and what equipment might be used to speed production and increase profits.—CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1002. CATALOG NO. 22—An attractive illustrated catalog describing in detail the discussed colorful containers and the new curved trucks for textile use.—DENFELD, INC., Medford, Wis.

1003. CASTERS AND WHEELS—128 pages, describing casters and wheels suitable for all types of industrial equipment. Every engineer, executive and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

1004. BASKETS, HAMPERS & TRUCKS—This 24-page catalog is profusely illustrated and contains complete description on the Dandux line, especially designed for the textile industry.—C. E. DANIELS, Dandux, Dayton, Ohio.

1005. LANE CANVAS BASKETS—16 page illustrated booklet describing the Lane line of textile baskets for textile use.—W. T. LANE & BRO., Inc., Malone, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT — 96 pages of illustrations showing economical overhead handling equipment to meet every kind of handling problem.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

1008. CASTERS AND WHEELS—An illustrated booklet with complete specifications covering a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1010. CONVEYOR KEY BOOK—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well-illustrated with photos and drawings. Includes check-lists to help you see why different types of conveyor are used for maximum results.—LOGAN COMPANY, INC., Louisville, Ky.

1011. CAB-OPERATED AND FLOOR-OPERATED ELECTRIC HOISTS—Bulletin No. 127 describing and illustrating electric hoists of various types and capacities.—THE CLEVELAND & HOIST CORP., Monroe Falls, O.

1027. SINGLE BEAM CRANES—Bulletin No. 126 describing and illustrating the various types of overhead cranes manufactured.—RICHARD WILCOX CRANE AND HOIST CORP., Monroe Falls, O.

1028. I-S HOLLOW WARE—This 32-page catalog, of interest to industrial users, shows the Continental-Diamond's line of barrels, trucks, cans, barrels, buckets and trays. Complete descriptions and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 98, Del.

MISCELLANEOUS . . .

1101. AUTOMATIC BOBBIN REFINISHER—A descriptive bulletin illustrating and describing method of refinishing bobbins automatically in preparation for reuse.—A. M. RAND COMPANY, 200 N. 10th St., Milwaukee, Wis.

1102. BALING PRESSES—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1104. UNBRAKO SCREWS — Illustrated 16-page booklet No. 870 gives data on Unbrako hollow pod screws, with inserted point, self-locking features. Includes miscellaneous screws and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1105. INTERPRETATION OF ANALYSIS — In compiling this brief collection of terms which most frequently appear in analysis of surface active chemicals, an effort has been made to explain as clearly as possible the meaning of these terms to those who have had little or no chemical training.—WITCO CHEMICAL CO., Chrysler Bldg., New York.

1107. AUTOMATIC QUILL POLISHER—Bulletin describes production machine for refinishing loom quills. Tells how quills can be kept in perfect condition after first cost.—M. E. KARR MFG. CO., 2240 N. 30th Street, Milwaukee 10, Wis.

1108. FABRICATION OF U. S. STAINLESS STEELS—136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosion-resistance tables for chemicals.—CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1109. PUMPS—Catalog B-131-1 describes complete line of horizontal and vertical centrifugal pumps for every water handling service.—PECKHAM PUMP DIV., Food Machinery Corp., Los Angeles 31, Calif.

1111. BRUSHES—A 24-page booklet is now available which describes and illustrates the manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1114. SCOTCH TEXTILE TAPES — Four page brochure containing photographs and descriptive information on the many uses for pressure sensitive Scotch tapes in the textile industry.—MINNESOTA MINING & MFG. CO., St. Paul, Minn.

TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

Please send me, without obligation, free booklets or further information on New Equipment items described in the July, 1950, issue of TEXTILE INDUSTRIES.

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PERSONAL NOTES

ABOUT MEN YOU KNOW

Jule F. Marshall, vice-president of the American Felt Co., Glenville, Conn., was recently elected president of The Felt Association. **Stanley N. McNeilly,** Bacon Felt Co., Winchester, Mass., was elected vice-president; **Herbert S. Blake, Jr.,** secretary; and **Edward F. Kelly,** treasurer.

Kenneth R. Fox, formerly president of the Lowell Textile Institute, has joined Burlington Mills Corp. in an executive capacity.

Fairleigh Dickinson College, Rutherford, N. J., has announced the election of **Paul J. Luck** of New York City to the Textile Advisory Board. Mr. Luck is sales manager of the Metropolitan Dyestuff Department, Calco Chemical Division, American Cyanamid Co. and chairman of the New York Section, AATCC.

William Muir has been elected vice-president in charge of manufacturing (worsted division) of American Woolen Co., succeeding Francis W. White, who is now president.

Philip F. Coburn has been made assistant to the president and head of textile engineering at the Institute of Textile Technology, Charlottesville, Va. Mr. Coburn previously was vice-president of Monument Mills, Inc., Housatonic, Mass.

Lester D. Sayers, formerly superintendent of maintenance and technical at Tallassee (Ala.) Mills, has accepted the position of general manager of Dunson Mills, LaGrange, Ga., succeeding J. V. Nelson, resigned.

The Wool Bureau has announced the appointment of **Alan Peek,** formerly assistant director of information, as director of the department of trade relations. Mr. Peek will handle the merchandising and sales promotion program of the Bureau.

Charlton H. Williams has recently been named president of Swift Manufacturing Co., Columbus, Ga., succeeding **Paul K. McKenney, Sr.,** now chairman of the board of directors. Associated with the firm since 1937, Mr. Williams was formerly vice-president and general manager. **Harry L. Williams, Sr.,** who resigned as chairman of the board, has been named chairman of the executive committee.

Johnson & Johnson have announced the election of **Dr. William H. Lycan,** research director of that firm, to the

Dr. Lycan

board of directors. Dr. Lycan will be in charge of the new research center now under construction in North Brunswick, N. J.

Wilton Todd has become associated with Montreal Cottons, Ltd., Valleyfield, Quebec, in an executive capacity. Formerly Mr. Todd was connected with Kendalls Mills and Newberry (S. C.) Textile Mills in managerial positions.

Sheldon I. Van Vliet has been appointed head of the technical department of Greenwood Mills, Inc., and will be in charge of the technical, designing, fabric development, and quality control functions of the organization. **Paul E. Stocker,** formerly with Verney Corp., has joined Greenwood Mills as a member of the fabric development department.

Dr. Walter J. Hamburger, director of research and treasurer of the Fabric Research Laboratories, Inc., was recently appointed visiting professor at Lowell Textile Institute. Dr. Hamburger will lecture on fabric development to the senior and graduate students.

Michael J. Koroskys, formerly with the Wood Worsted Mills at Lawrence, Mass., has been appointed instructor in the woolen and worsted yarns department of Lowell Textile Institute.

The North Carolina State College Chapter of Phi Psi, national professional textile fraternity, presented its

STODGHILL & COMPANY

TEXTILE CHEMICALS

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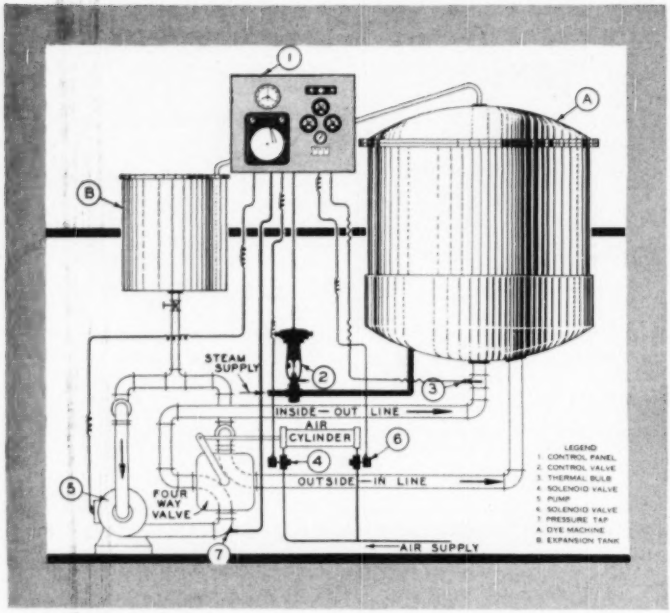
"THE SIZE THAT SATISFIES"

MASONEILAN
Dyeing Controls Assure Uniformity of Color



The Masoneilan package dyeing control system provides complete automatic control of the process. Uniformity of color is insured by governing total dyeing time, precise control of flow reversals and maximum solution temperature. In addition, Masoneilan controls conserve dyestuffs and chemicals . . . reduce processing-time and assure uniform high quality products.

MASONEILAN ADVANTAGES

- Inside and outside circulating time adjustable over a range of 0-20 minutes.
- Total time of dyeing process adjustable over a range of 0-180 minutes.
- Recording and controlling of dye solution temperature.
- Indicating lights show flow direction of dye solution and pump action.
- Indication of pump discharge pressure.
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"man-of-the-year" award to **J. C. Cowan, Jr.**, president of Burlington Mills Corp., at the organization's annual meeting held recently.

R. E. Henry has announced his retirement as vice-president of J. P. Stevens & Co., Inc. His position as executive officer of Aragon Baldwin Mills, Dunean Mills, Piedmont Manufacturing Co., Victor Monaghan Co., Wallace Manufacturing Co., and Watts Mills division, will be assumed by **R. G. Emory**, vice-president, who is now assistant executive officer. **Harold R. Turner**, general manager of Dunean Mills and Watts Mills, has been named assistant executive officer of these mills. **J. Wilbert Wood** assumed that position at Aragon Baldwin Mills, and **George P. McClenaghan** was appointed assistant executive officer of the other divisions.

Dr. M. K. Horne, Jr., dean of the School of Commerce and Business Administration at the University of Mississippi, was recently appointed director of economic research of the National Cotton Council with headquarters in Memphis, Tenn.

Erwin Mills, Inc., have announced the transfer of **Ray Marley** from the firm's No. 1 plant in West Durham, N. C., to Erwin, N. C., where he will be superintendent of the No. 2 plant. His position in Durham will be filled by **T. C. Pegram**, formerly superintendent of No. 3 plant at Cooleemee. The new superintendent at the Cooleemee plant is **C. W. Howell**, transferred from the Erwin plant. **E. P. Lavoie**, formerly with Dan River Mills, Inc., is now assistant superintendent of the finishing plant at Cooleemee.

Obituaries

John Scott, Jr., died the latter part of March in Philadelphia, Pa., at the age of 90. Mr. Scott was a founder of Keystone Hosiery Co., and retired when the company was dissolved in 1918.

On April 22 **Ernst Levi**, president of Ruby Knitting Mills, Inc., Buffalo, N. Y., died at the age of 72.

Arthur H. Cottingham died on April 15 at his home in Dillon County, S. C. Before his retirement, Mr. Cottingham was general manager of Victor-Monaghan Co., Greenville, S. C.

Joseph Henry Separk, 79, Gastonia, N. C., textile industrialist, died April 30 of a heart attack. Mr. Separk had been president and treasurer of Separk Sales Co., Gastonia, since 1933,

and was an incorporator of Gray Manufacturing Co., Arrow Mills, Parkdale Mills, Myrtle Mills, Arkray Mills, Priscilla Mills, and Textiles, Inc.

Harry Lavitt, 53, president of Leonard Hosiery Corp. and selling agent for Knit Sox Knitting Mills, died recently of a heart attack.

At the age of 65, **George M. Thorstensen**, president of the Ogden, Utah, Knitting Co., Inc., died after a short illness.

Following a long illness, **Edward W. Stephens**, 51, manager of belting sales for The Goodyear Tire and Rubber Co., died on May 8.

While attending the American Textile Machinery Exhibition in Atlantic City, **W. Lester Morris**, 61, suffered a heart attack, and died on May 9. Mr. Morris was president and treasurer of Clinchfield Mfg. Co., Marion, N. C.

R. L. Sanborn, purchasing agent for Firestone Textiles, Inc., died suddenly on May 8 at the age of 56.

Howard D. Jobe, 64, vice-president of Adams-Millis Corp., High Point, N. C., died the latter part of April while on his way to Detroit, Mich.

After a brief illness, **William H. Tharp**, Worthington, Ohio, died on May 10. Mr. Tharp was a representative for The Wm. Powell Company, Cincinnati, Ohio.

Louis Yanovsky, 58, owner and founder of the Gerry Lou Knitting Mills, died recently after a heart attack.

SUPPLIERS' NEWS

WHAT THEY ARE DOING

Tesco Chemicals, Inc., Atlanta, Ga., has taken over the chlorine and ammonia cylinder-filling operation of Mathieson Chemical Corp., with Mathieson continuing to provide the basic products. The move is said to offer improved distribution and service. With the purchase of Mathieson's southern filling, cleaning, and inspection facilities by Tesco, the technical personnel also became a part of the Tesco staff. Tesco also took over assignments of Mathieson's existing contracts.

The Carter Traveler Co. and Mill Devices Co., divisions of **A. B. Carter, Inc.**, have added to their engineering sales department P. L. Piercy and J. R. Richie.

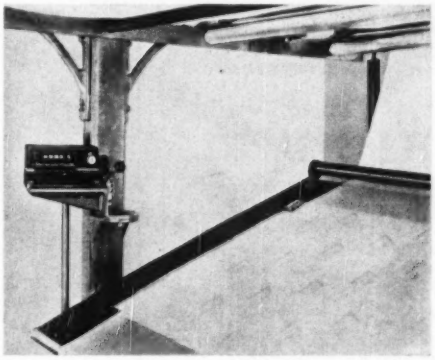
At a recent meeting of the partners of **J. E. Sirrine Co.**, engineers of Greenville, S. C., A. S. Bedell was elected chairman and George Wrigley vice-chairman of the executive committee. Other members elected were H. L. Hagerman, A. D. Asbury, and R. R. Adams.

J. W. Davis, manufacturers' agent of Columbus, Ga., was recently elected to the board of directors and made exclusive southern agent for **Methuen Card & Napper Clothing Co.**, Methuen, Mass. Part of the plant will be moved to Columbus, Ga., early in 1951, with a card flat and licker-in repair shop to follow later. The company is equipping its plant with the most modern machinery as part of its expansion program.

At a recent stockholders meeting of **A. E. Staley Manufacturing Co.**, A. Q. Petersen, president of Wesson Oil and Snowdrift Co., Inc., and Harold D. Wright, chairman of the board of Republic Coal and Coke Co., were elected to the board of directors. The company also announced the appointment of A. R. Staley, formerly active head of the A. R. Staley Sales Co., Phoenix, Ariz., as sales promotion manager of the firm.

Allen Co., New Bedford, Mass., has changed its name to **Allen Beam Co.** With the transfer of ownership of the company, Lewis C. Briggs III has been appointed president, and Benjamin C. Miller, treasurer. These men, with Charles K. Beals, comprise the board of directors.

Monsanto Chemical Co. has appointed Richard M. England, Bar-



MODEL "PVR"
YARDAGE PRINTING COUNTER on Inspection Frame

The "PVR" counter, driven by the measuring roll, prints on a card the true yardage run through the frame.

ON THIS AND MANY OTHER APPLICATIONS, RESULTS PROVE . . .

- **INCREASED PRODUCTION** — no time wasted by operators in writing figures.
- **COST SAVINGS** — true yardage count is recorded.
- **ELIMINATION OF COSTLY MISTAKES** — printed figures cannot be misread.

Durant Sales Engineers will be glad to demonstrate.

The Counter that Gives VISUAL and PRINTED Records of Production.

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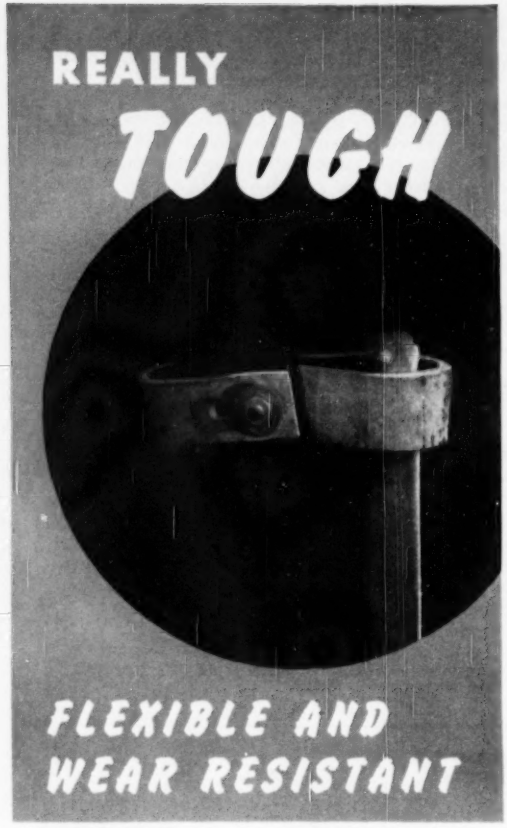
PRODUCTIMETERS SINCE 1879 — Speedometers OF INDUSTRY



RHOADS

BI-CUT* CHECK STRAP

The new Rhoads "Bi-Cut" Check Straps have proved their merit in the growing number of mills in which they have been used. They are tough, but flexible enough to resist repeated sudden shock and hard wear. In service, the body of the strap drops enough to clear binder bolts and nuts, due to the "Bi-Cut" design with sloping slots.

The edges flare to accommodate arc of picker stick. "Bi-Cut" Straps are sorted for weight so that the right strap may be supplied for different looms.

There is a complete line of Rhoads Loom Straps and Harness and other mechanical Leather Products.

Write for complete details.

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THE PRINCIPAL MILL SUPPLY HOUSES AND CARD MAKERS

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Style 20B

then let's talk about

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Ask about our new
Filling-handling system.
Eliminates dumping and waste.

W. T. LANE & BROS., Inc.

Manufacturers

Poughkeepsie, N. Y.

rington, R. I., as textile chemical sales representative in Rhode Island, southern Massachusetts, and eastern Connecticut. Mr. England was formerly superintendent of the Dodgeville (Mass.) Finishing Co.

James M. Myers has been appointed to the sales promotion and sales development staff of **Standard Chemical Products, Inc.** He was formerly general superintendent of North Carolina Finishing Co., Salisbury, N. C.

R. F. Redding and M. K. Thackston, formerly with Deering-Milliken and Co., Inc., are incorporators of the firm, **Thackston & Redding, Inc.**, Spartanburg, S. C., dealers in new and used textile machinery and supplies.

In a recent ceremony, attended by all employees who had been with the firm fifteen or more years, **Nopco Chemical Co.** inducted eleven new members into the Nopco 15-Year Club. This group now has 155 members ranging from 15 to 43 years of service, or 22% of the employees.

Wide awake community interest in science and industry was demonstrated recently when the Stamford Research Laboratories of the **American Cyanamid Company** were opened to the public for the first time since its establishment in 1936. Nearly 5000 visitors, including families and friends of employees, local business, civic, and professional leaders, and the press saw the research facilities. Among the exhibits related to the textile trade were melamine resins and acrylonitrile. Waterproofing and flameproofing of fabrics received particular attention from the guests.

Final arrangements have been completed in the organization of **Mathieson Hydrocarbon Chemical Corporation**, a joint venture of Mathieson Chemical Corp. and the shareholders of Tennessee Gas Transmission Co. Land has been acquired in Kentucky for construction of several buildings. The new company will produce a number of chemicals from hydrocarbons contained in natural gas.

The Bullard Clark Company's **E. H. Jacobs Northern and Southern Divisions** have announced the addition of two service engineers to their staff: Bill Heacock, Sylacauga, Ala., formerly associated with J. E. Sirrine & Co., will serve the mills in Alabama, Louisiana, Mississippi, and west Tennessee. The firm will be represented in central South Carolina, parts of western North Carolina, and in eastern Tennessee by L. J. McCall of Greenville, S. C. Mr. McCall was associated with Drayton Mills, Spartanburg, S. C., for six years, and since the war has been in business for himself in Greenville.

Mr. McCall **Mr. Heacock**

Hunt Machine Works, Inc., has announced the appointment of Alfred N. Willett as vice-president, director, and works manager. Mr. Willett was formerly assistant to the general superintendent of Crompton & Knowles Loom Works.

A dyes and chemicals export department has been formed by the **American Cyanamid Co.** to handle all foreign activities in connection with the products of the firm's Calco Chemical Division (except pharma-

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Free Write now to Dept. I-7 for free utility knife with Plyweld handle.
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ceuticals), Industrial Chemicals Division, and Plastics and Resins Division. The new department will be under the direction of Fraser M. Moffat, Jr. J. L. Clark, formerly export sales manager, is assigned to special duties under Mr. Moffat. Other appointments are: H. E. Lorenz, manager, and J. C. Martin, assistant manager, of the Eastern Hemisphere; Henry W Rojas, manager, and W. T. Casey, assistant manager, Western Hemisphere.

The business of the **Meadows Machine Works** of South Kearney, N. J., has been acquired by the **John Waldron Corp.**, New Brunswick, N. J. William J. Cullen, founder and general manager of Meadows, has joined the Waldron organization in an official capacity, according to B. R. Newcomb, president of the Waldron Corporation. This move will enable his firm to provide a most complete line of web processing machinery.

Alfred Brandt has joined the sales staff of **Sun Chemical Corp.** as technical representative in the Caribbean area, including Central America, Mexico, Colombia, and Venezuela.

Fred M. Gillies, formerly works manager for Inland Steel Co., has joined **Acme Steel Co.** as executive vice-president, according to a recent announcement.

K. McCoy Crytz succeeds the late J. Floyd Childs as sales agent for the Atlanta branch of **Howard Bros. Manufacturing Co.** Mr. Crytz was repre-

Mr. Crytz **Mr. Lawrence**

sentative in Alabama for the past seven years. E. Jack Lawrence, who had been assistant to Mr. Childs, is now general manager of the Atlanta branch.

Gerard P. Weishaar has been appointed eastern regional manager of **The American Pulley Co.**, and will be in charge of district managers and representatives in the New England, Rochester, New York, Philadelphia, Charlotte, and Atlanta territories.

National Electric Products Corp., Pittsburgh, Pa., has created a southeastern region in its sales organization to provide for its customers a faster and more consolidated service. Walter J. Barnes is regional manager, having established headquarters at 310 Walton Building, Atlanta, Ga.

The Baker Industrial Truck Division of **The Baker-Raulang Co.**, Cleveland, O., has appointed the Dillon Scale & Equipment Co., 3907 Elm St., Dallas 1, Tex., as district representatives for all but the southeast portion of Texas. The firm has also announced the appointment of Henry S. Haight of the Haight Engineering Co., Charlottesville, Va., as district sales representative for the central portion of Virginia. Associated with Mr. Haight will be C. Mahanes and A. C. Traynham.

Even though **Arnold, Hoffman & Co.'s** textile starches, gums, and sizings are being made by **National Starch Products, Inc.**, as previously announced, Arnold, Hoffman will continue to participate in the sale of

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in MONTGOMERY. *The Jefferson Davis* — Homer Spiva, Manager

Executive Offices: Atlanta

Carling Dinkler, President

Carling Dinkler, Jr., V. P. & Gen. Mgr.

these items under a non-exclusive selling arrangement.

Thomas C. Hardwick has been named sales representative at Charlotte, N. C., for the Columbia Chemi-

Mr. Hardwick

cal Division of **Pittsburgh Plate Glass Co.** Mr. Hardwick has been with the firm since 1946 and has been at the Charlotte office since January, 1950.

Cyclotherm Corp. is supplementing its present national sales and service organization by the appointment of the following new distributors: Rumbold and Co., Inc., Atlanta, Ga., for Georgia; Phillips Engineering Co., Detroit, Mich., for Michigan; Bingham and Risdon Co., Green Bay, Wis., for Wisconsin; General Industrial Supply Corp., Fort Worth, Tex., for western Texas; Royster H. Johnson Co., Charlotte, N. C., for North and South Carolina; Dempster Bros., Knoxville, Tenn., for Tennessee; Keady Sales Corp., Chicago, Ill., for northern Illinois; Air Conditioning Engineers, Inc., Mobile, Ala., for lower Alabama, Mississippi, northern Florida; and Flagg, Brackett & Durgin, Inc., Boston, Mass., for the New England states.

Kenneth Burden has joined the New England sales staff of the **New**

Mr. Burden

York & New Jersey Lubricant Co. His territory will include western Massachusetts, southern Vermont, and northern Connecticut.

After forty years with **Steel Heddle Manufacturing Co.** in capacities of director, vice-president, treasurer, and manager of sales, Robert J. Freitag has retired. He will however, remain a member of the board of directors

Mr. Freitag

of the company. Mr. Freitag, born and educated in Switzerland, came to this country in 1898 and joined Steel Heddle in 1910. He will be succeeded as manager of sales by Frank H. Kaufmann.

The **United States Testing Co.** has opened a new wool core testing laboratory in San Angelo, Tex., to provide wool men 72-hour service on core testing. The laboratory is under the direction of Howard E. Ragsdill.

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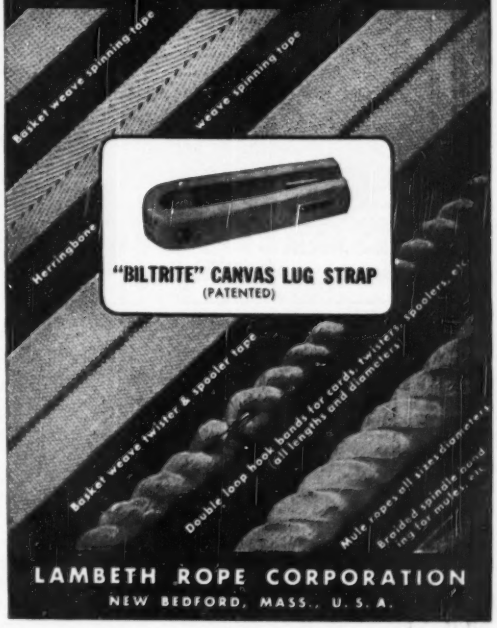
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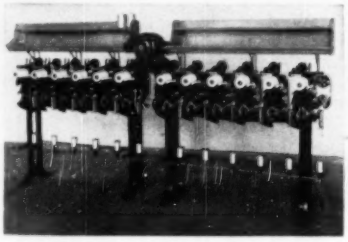

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JUNE 1, 1950

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1—Saco-Lowell F-5 Hopper feeder, 24"
2—Saco-Lowell No. 4 Bale Breakers with 12' aprons
2—Kitson 3 beater 40" single process Pickers, Aldrich rebuilt in 1947
3—H&B 3 beater, 40" single process Pickers
13—Whitin 40" cards, 12" coilers, 24" doffers
2—H&B 40" cards, 12" coilers, 26" doffers
8—Lowell 40" cards, 12" coilers, 24" doffers
2—Frames Medley drawing, 6 deliveries each, 5 roll, 1946, 12" coilers, 8 ends up
12—Frames Saco-Lowell drawing, 6 deliveries to frame, spiral gears, 12" coilers, metallic rolls
7—Saco-Lowell 10x5 Slubbers, 8" gauge, equipped with Whitin interdraft about 1942, 5—96 spindles, 2—104 spindles
2—Woonsocket 10x5 Slubbers, 7½" gauge, equipped with Saco-Lowell J1S long draft, 114 spindles each.
4—Woonsocket 8x4 Slubbers, 6" gauge, equipped with H&B 5 roll long draft in 1949, 128 spindles ea.
24—Frames Whitin 3" gauge spinning, tape drive, 1⅝" ring, 224 spindles each, Whitin long draft 1941.
13—Frames Fales & Jenks 3" gauge spinning, tape drive, 1⅝" ring, 288 spindles each, Whitin long draft 1947.
17—Frames Mason 3¼" gauge spinning, Meadows band drive, 1⅝" ring, 252 spindles, *New* Draper spindles, rings, separators, ball bearing cylinder units, lifter rods. Rolls reworked this year, Whitin long draft. EXCELLENT CONDITION.
18—Frames H&B 3½" gauge spinning, band drive, 2" rings, 252 spindles, equipped with H&B long draft
8—Draper Modified D Looms, 1934 model, 86" reed space, 16 harness gem heads, motor driven, 1½ HP, 550 volt.

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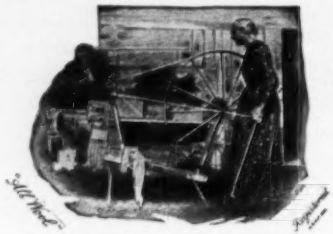

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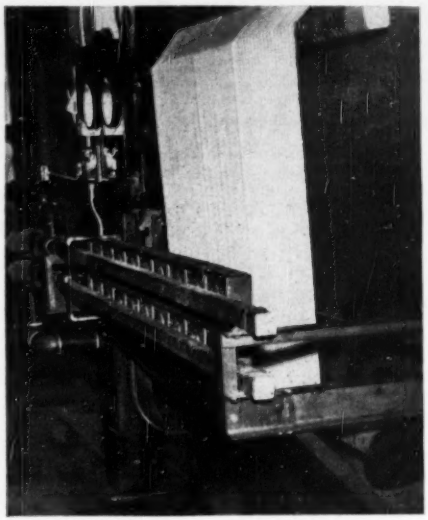

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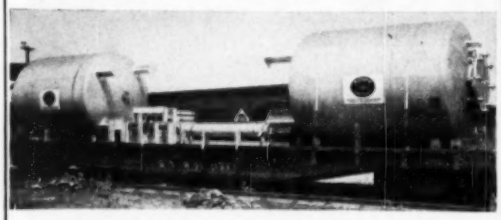

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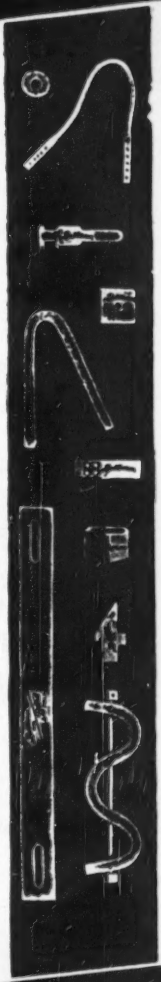

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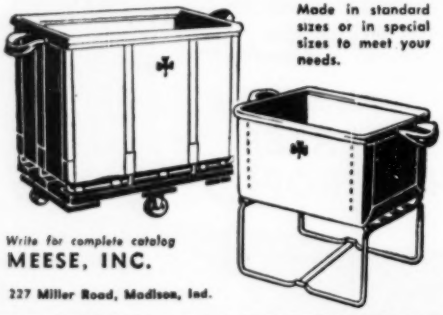

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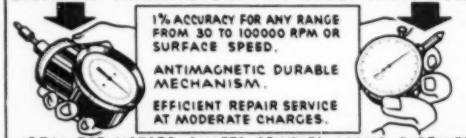

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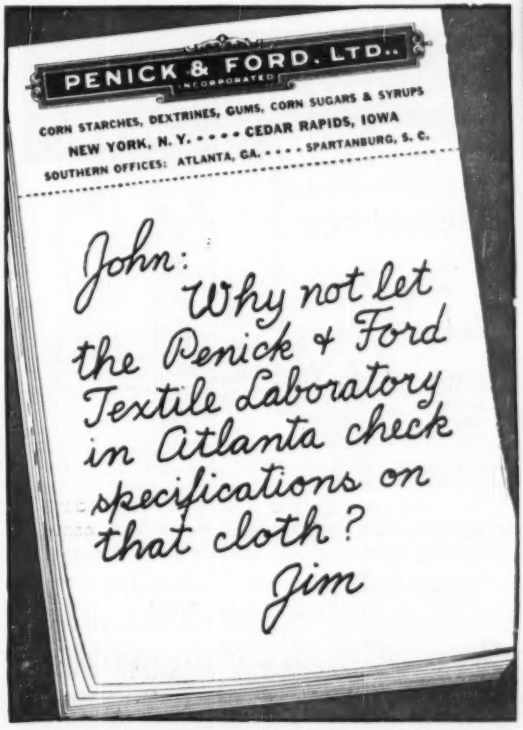
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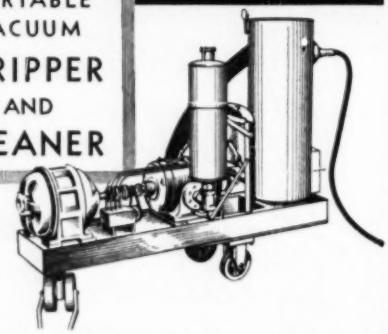

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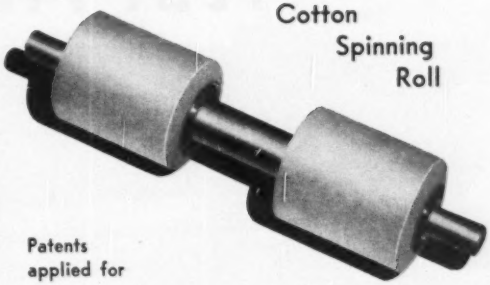

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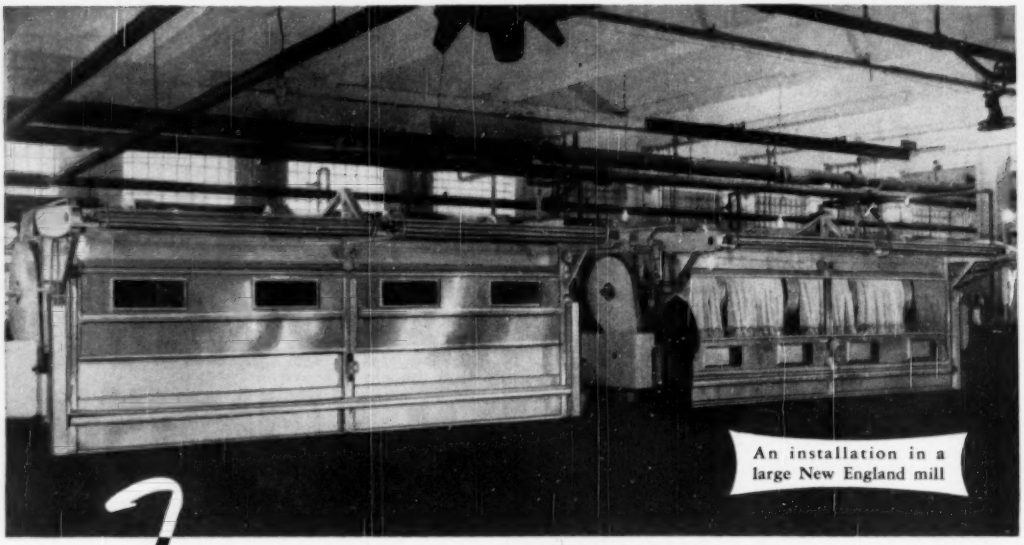

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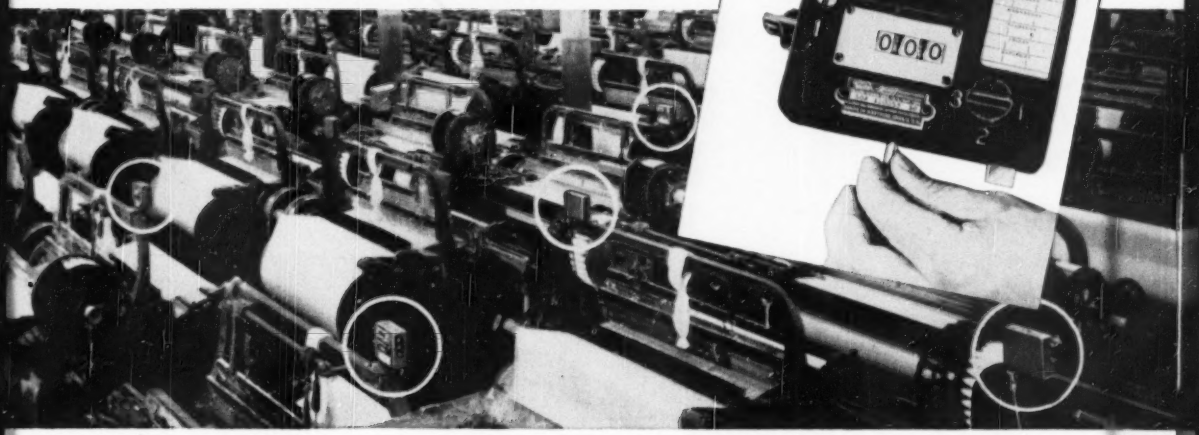

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